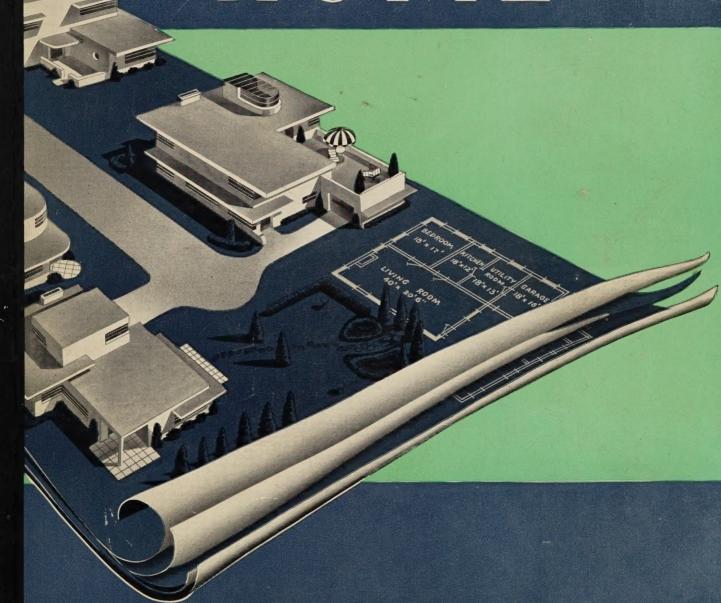
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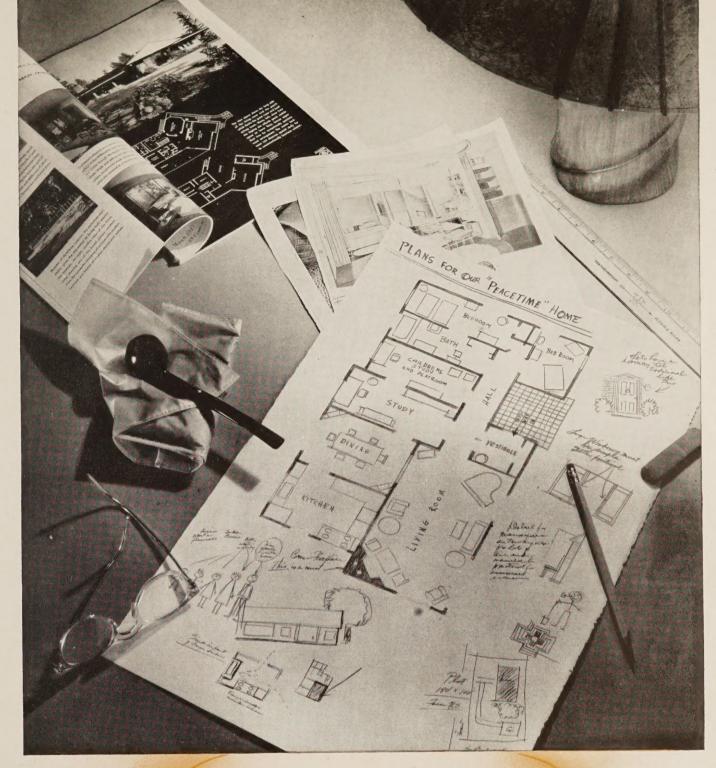
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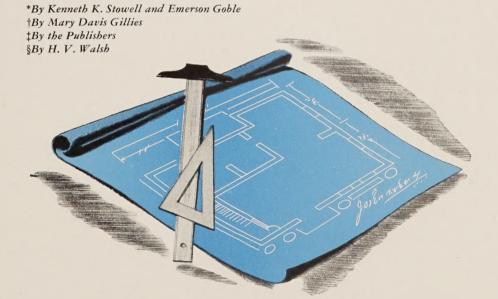
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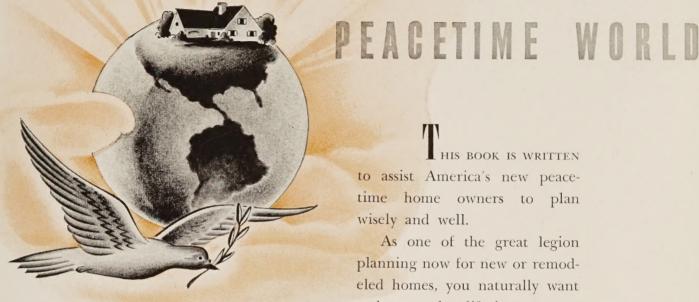
Home Ownership is a Thrilling Adventure



Creative Layout and Pictorial Supervision by Harold B. Lentz



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to assist America's new peacetime home owners to plan wisely and well.

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We are proud to have a part, through this book, in the planning of America's new and remodeled homes-homes which will help to keep America strong and united. We hope this book will serve you well in planning and building or buying the kind of home you want.



Tomorrows Home

MOST PEOPLE have admired the coziness of a Cape Cod, the simple elegance of a Georgian, or the gracious dignity of a Southern Colonial, and have longed to own one of their own. Perhaps they remember some particular house that once represented the pinnacle of desire. Maybe they envied the people who lived there, or maybe that house just sang a little melody which still runs through their thoughts about a home. They know what they want for their house. Or so they think when they begin to plan it.

But people keep progressing. They grow older, wiser, more sophisticated. They develop new interests, undertake new activities. And they acquire families, with their own interests and requirements. Standards go ever higher. Technical progress is rapid. And all affect a family's needs and desires.

In house planning, such progress must come into focus; perhaps not in the beginning, but at some stage as plans take shape and requirements stand out more clearly. Perhaps, when it is all worked out it will still be possible to work in the melody of that cozy Cape Cod. But, this is just a warning that the typical family has its moments of wavering and

wondering. Then must come the decisions about the new features they have just discovered they like, or the needs they had not really faced. They absorb ideas, study photographs, pore over plans, work with cost figures, analyze themselves and their wants. They must expect to become a little confused as well as edified. It's worth it, and it's interesting.

Very few people build or buy homes just for shelter, just to store furniture and gadgets for keeping house. They build their own house for reasons which are basically emotional. And quite properly. A house may be a "machine for living" as a piece of engineering, but it would be a poor buy if it stopped there.

Design for Living. It is well worth while to first analyze your wants. Trot them out frankly and inspect them. And, most of all, clarify them. A bit of serious introspection at this point will focus many of the vaguer wishes that otherwise will crop up later in time-consuming vacillation. And it will be a good guarantee of final satisfaction.

What is the social importance of the house in your own scheme of life? Do you want most of all to join a certain neighborhood group, to fit into a



pattern already established? Or do you want to step out ahead? Perhaps you definitely want to set yourself apart from surroundings. Is the house to express some dominant note in your own family existence? Is it to be a haven of rest? Or a center of social life? A business asset, perhaps? A mark of your scorn for the simple things? Maybe you'd like to build a house that would shock the neighbors, please them or lead them onward,-houses do these things. Inevitably they express the personalities of their owners, and the architects and builders want only to know which traits they are to reflect in the design. You do not need to psychoanalyze yourself in public, but if you have settled some of these questions in your own mind, you will know what choices to make.

All these questions affect the planning of the house in many different ways. It may be that you are more interested in simple and convenient living than in glamorous entertaining. You may prefer a small, snug place that will minimize household

cares; indeed that may well be a stern necessity. Or your family needs may be light but your social obligations heavy; you will want then to design a house for guests, with a large living room, a complete dining room, a playroom and so on. Have you made more money than you want known? Or do your special circumstances demand a show of prosperity, even though periods of adversity may be expected? Either way, there are many things a designer can do to help you. He won't, of course, bluntly ask you questions like these, but he will spend much time on searching analysis trying to fathom your needs and desires.

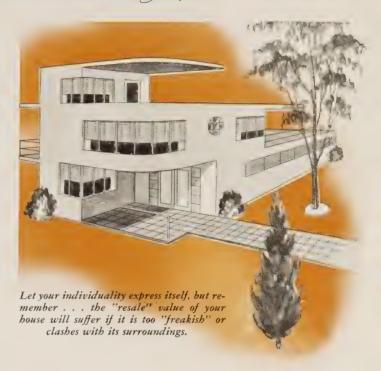
Be Individual—With Restraint. There are, of course, many other questions along this general line. Most of them do not yield Yes or No decisions; they become mixed in various tones of "Maybe." A point to remember in this preliminary analysis is the locality of the house. Not just whether it's California or New England, but in terms of a specific neighborhood. If you are building in a new neighborhood,



even one just over the hill, consider whether the habits of your new friends will affect your own. Will you, for example, suddenly wish you had an outdoor fireplace? Or will you, almost of necessity, take a renewed interest in gardening? Or must you face your house for protection against busy-bodies? Frequently, thinking of your house in relation to certain other people will help determine your own wishes. There is a sound economic reason, too, for making such an analysis. While the house should be individually designed to an individual set of requirements, it is definitely inadvisable to build a freakish house. Or what would be a freakish one in its location. Real estate men call it "resale value." The resale consideration is not to be brushed aside too quickly. Few people build with the idea of selling, but it is a cold fact that most houses eventually come on the market. Statistics show that more than half of the living units in the country are occupied by tenants, whereas almost no dwellings (except for apartments) are built to be rented. Everybody hopes to live in the new house until he dies, but even then, the heirs would have a real worry on their hands if the house were a freak. This was one of the worst faults of the earlier, faddish "modern" houses—they did not grow old gracefully; they remained a non-conforming oddity and were difficult if not impossible to sell.

In this more enlightened age DESIGN is no longer a luxury available only to those who can afford to flaunt its frills. It is, indeed, the basis of the technical progress that has made America powerful, that is expected to extend social and material blessings to even the humblest citizens. Architecture is turning from building massive and imposing palaces for the wealthy to improving the lot of the common man. It is already clear that architects and engineers will not accomplish that by technical research only. They are studying the aspirations of the people having long since discovered that mechanical refrigerators alone will not do much to build morale. So one who can build the house he wants is well advised to recognize the social aspects of his own problem, and analyze them thoroughly. Having done this, now is the time to turn to more specific requirements for the house.

What Kind of House Do You Need?. There is still a temptation to think in terms of architectural style, to start at this point with something like this: "I want a white New England house with green shutters and a red front door. We'll need three bedrooms, two baths upstairs and a lavatory downstairs.



I want a separate dining room, large living room with pine paneling around the fireplace, and a modern kitchen. Gas heat, automatic gas hot water service and a two-car garage."

That might be a way to describe a house to a real estate broker, if you were looking for one to buy. But it won't help much when you are planning the exact house you want just for yourself. There are thousands of houses which would meet those general specifications, and yet would fall short of being your ideal house. You are building this one. You can have innumerable details just the way you want them. You can have a darkroom for photography, a den for hunting trophies, a playroom for the children, a specially built storage room for garden tools. You can have glass walls, to utilize solar heat and to open up the view. You can spend as much as you like, or you can plan a house within a budget, and decide which features are to be left out. If there must be some compromises—and there always must be a few-you can decide them your way. It's your house; don't be too easily satisfied.

This phase of house planning—the floor plan, as the architect and builder call it—is worth all of the study you can give it; and all of the help you can get is worth its price. Before you are satisfied, the plan will probably be drawn and corrected a dozen times, and you will still be thinking up ideas that will involve revisions.

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Start With the Interior. The importance of the plan explains the reasons for delaying a decision about architectural styling. The modern scientific way to plan a house is to start with the needs for the interior, draw the best possible plan, and then design a suitable exterior or cover for the building thus arranged. "Functional planning" is the technical term for it.

If that sounds too mechanical, if it suggests something boxlike and "modernistic," don't judge too hastily. The "functional" house can still be beautiful. Perhaps it will yet turn out to be a New England Colonial. It is true, unfortunately, that many a house planned in this inside-first manner a few

years ago, did look something like a collection of boxes joined in a shed. But that was never necessary.

What happened was that some of the earlier, most able proponents of logical planning got carried away by their missionary effort. They were breaking with tradition, so they scorned all traditional forms. Perhaps they became enamoured of technicalities, as the highly trained musician frequently does. And just as the musician becomes scornful of simple, emotional melodies, the functional planners became contemptuous of traditional architectural styles, and expressed their contempt in unlovely exterior designs.

At any rate, there was a period of flat-roofed, unadorned boxes which had beauty only for a surrealist. The neighbors called them "monstrosities." In point of fact they were just as much a fad as the horrible turreted things of the "Eighties."

The "Contemporary" House. Architects call the functionally-planned house "contemporary." What they mean is a building designed in the practical manner-the "functional"-but following no particular architectural style. It is definitely designed to have eye appeal. It does not try to express its loathing for everything that has gone before; it does not hesitate to use some ornamentation, if that seems desirable. It does, however, seek to find its basic beauty in a composition of shapes and masses just as the beautiful landscape usually portrays the babbling brook in an "S" curve. It is the task of the architect or builder to develop the beauty inherent in a logical building.

He has just as many tricks in his bag as the landscape painter. He too has color, and texture, and pleasing forms and patterns and a great variety of materials. He can satisfy man's age-old craving for beauty; it is just as much a part of his task as the functional analysis of the floor plan.



🟋 In this "functional planning" we believe that the new home owner should first decide on the kind of mechanical equipment he will have in his new home. The comfort of the entire family will depend on the decisions made. The modern American home will be built to serve those who live in it. The new gas appliances are built to serve the four major household requirements—and to do so without causing inconvenience and worry to the owner.

These modern gas appliances, indeed, provide maximum service at low cost. Installed in your new home, they will mean the difference between existence in a house and civilized living in a modern home. . . . Publishers' Note



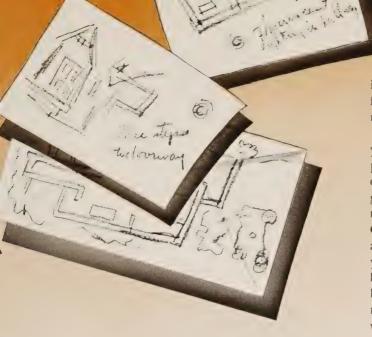




PLANNING and building a house is not really such a difficult thing to do, especially when you know what you want and what your real needs are; and, it is easier when you know where the house is to be, that is, the size and shape and slope of the lot. Planning your own home is a fascinating game and a profitable one. By trying different schemes on paper and imagining just

where everything is to be placed, and how you'll get from one place to the other most easily with the fewest steps, and just what each room will be used for each hour of the day, you will eventually arrive at the plan of the house that is best for you.

Plan the general shapes, locations and arrangement of the rooms and areas where they seem to you to be best suited to the things you want to do in



the house, to the furniture and things you have, to the way you would like to live, to the size and condition of your lot, and to the size of your capital and your income.

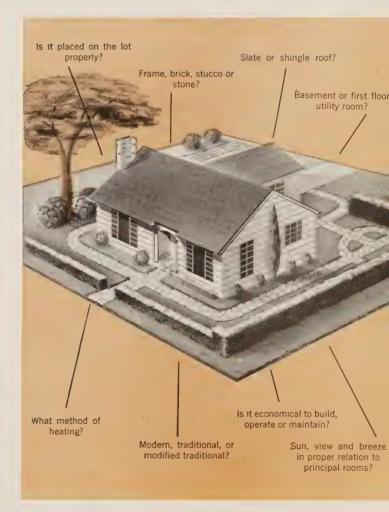
This is the kind of planning you can do and which is the most fun to do. Of course, you will not expect to make the "working drawings" which the contractor must have and follow, the "blueprints" with all their dimensions and notes. Nor would you expect to write all the technical details regarding materials, workmanship, and equipment. These things are all written down in the "specifications" by an expert because they form the basis of the building contract and you will need the protection of expert knowledge and experience, so that you will get what you want and what you pay for.

Gather in Ideas! Of course, it takes time and thought and analysis, and looking over many plans of houses that you'll find in the home magazines, the architectural magazines, and in books and in the literature of manufacturers, lumber dealers, utilities, etc. (A handy envelope to hold clippings is fastened to the back cover of this book). You'll find some plans that almost fit your needs and tastes. And you'll find some features in one house that you like and some in others, so you'll try to put as many desirable features together in your plans as you can.

It is a good idea at the outset to realize that you can't have everything, that you'll have to choose the things you want most and that come within your budget and leave out the others even though they would be good to have. You can so plan, however, that some of the desired features can be incorporated

in the house at a later date; but this requires careful planning, and knowing just where and how the new room or new feature can, and will, be added.

Get Expert Advice. There will come a time in your planning when you'll need expert advice and practical help. When you have planned in your own way what seems a good house on paper, it's a good idea to get an expert to look it over, an architect or experienced builder, before you get too "set." Only someone with experience can tell you all the advantages, and, yes, the disadvantages of the house you've planned. He can tell whether it makes the best use of the lot, whether the sun, view and breeze are in the right relation to the principal rooms, whether it can be built for the price you want to pay, whether it will be economical to build, and to operate and maintain. He will suggest things you may not have thought of, things he knows because of his experience and training.



Take These Simple steps before you build or buy

Plan for Space. First you want space—
space enough for all the activities of all the family, individual activities, group activities, personal, social, physical, cultural, habitual or occasional. You want enough space for all of these activities, and that means also enough space for all the things you have and use, the furniture, equipment, clothing, supplies, tools, utensils, instruments, gadgets, and what not. You'll have these things in mind and probably on paper. If you have not already made out a Check List we suggest you use the copy inserted in the clipping envelope attached to the back cover of this book and amplify it to include your special needs.

But, enclosing space costs money, both in initial investment and in cost of operation, maintenance and repair. So you want enough space but not too much. This means you want arranged space, space so planned that it will yield the maximum in usefulness, a minimum of waste space or space that is used too infrequently. It suggests, too the "multiuse of space," that is, space adapted to different uses at different times. Planning, you see, is mostly determining and arranging space. And building is mostly enclosing space with suitable materials.

Plan for Convenience. Convenience is space arrangement, i.e., so sizing and placing the rooms (and the furniture, equipment and storage within them) that as few steps and as little time as possible will be spent uselessly. Planning for convenience requires not only careful placing of the rooms in relation to each other, but well thoughtout arrangement of everything in the rooms so that all items will be as close as possible to the places

where they will be most used. This goes for both movable and built-in furniture, for doors, and windows and (perhaps more than ever before) for storage spaces (closets, cabinets, cupboards, etc.). This should be as true in the living room or bedroom as in the kitchen. You want what you want when you want it, and where you want it, with the least possible bother in getting it. The freer type of modern planning or home-design makes this a more easily accomplished purpose than the more traditional, tight or stereotyped planning of past generations.

Plan for Comfort. Comfort means planning not only the space but the equipment, materials and facilities. It takes many conditions and factors to produce comfort, for comfort implies control of temperature, air purity and flow, humidity, light, both natural and artificial, water and san-



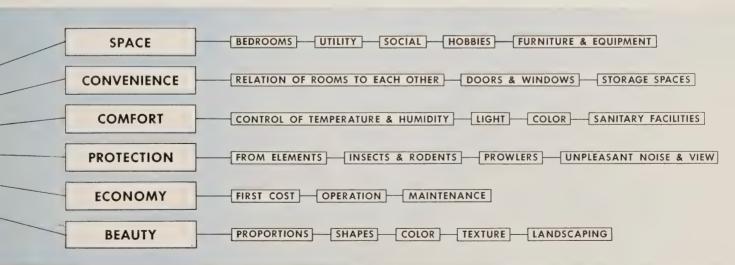
itary facilities, sound, color and texture (and odors too). It is not just a matter of the shapes and sizes and relative softness or hardness of your furniture. It is psychological as well as physical, and conditions conducive to comfort differ with different people, and at different ages and conditions of the same people. A house that is "cozy" to some, might seem too cramped for comfort to others. A room at 68° may be comfortable for the youngsters but a mite too chilly for their grandparents. The more positive and automatic the controls of all these things the greater the comfort. This takes a lot of planning and the consideration of many types and kinds of equipment that must be incorporated in the building so that they will function efficiently and economically. Here again the knowledge and experience of your architect and your builder are invaluable and essential.

Plan for Protection. The first reason for building houses (or for living in caves for that matter) was for protection from the elements and from prowlers, bipeds as well as quadrupeds. Protection from rain, snow, cold, heat, strong winds, sun glare,-protection from insects and small rodents,-from intruders, snoopers, peepers and from staring neighbors,-from street or other noises and even from unpleasant views or obnoxious odors,all these must be taken into account in the planning of your house. They must all be thought of in the placing of the rooms, in the choosing of materials and equipment, and in the designing of details. In many regions the house itself must be protected against termites by placing a continuous, non-corrosive sheet metal barrier between the foundation and the sill. There is no end of things to think of in connection with protection, and the trick is to get the maximum with the least cost.

Plan for Economy. Economy comes with good planning, both economy of first cost and economy of operation, maintenance, and repair. In many instances a little, or even a lot, added to the first cost will mean real, substantial savings in the long run, in the month by month cost, as well as in freedom from the inconvenience of interruption of use. The more durable, reliable and more trouble-free piece of equipment may cost more to



Label Since the factors contributing to comfort in the home include "control of the temperature, air-purity and flow, and humidity," it is appropriate to point out that the Janitrol Winter Air Conditioning unit automatically insures these conditions. For this compact, gas-fired house-heating unit, built for a life-time of service, filters the air, heats that air, humidifies it, and circulates the clean, humidified warm air, at a constant temperature, thermostatically controlled. . . . Publishers' Note



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buy but will mean real economy in dollars saved over a period of a few years, and a higher resale value in the house. Insulation is just one instance of an investment that pays for itself. Storm sash (or double glazing) is another. Good plumbing, heating, non-corrosive pipe, gutters and leaders are a few of the others.

Plan for Beauty. Not least of the things you want in your house is beauty. Call it "style" or "attractiveness" or "appropriateness" or what you will, without this quality the house will never be the joy to you that a real home of your own should be. Nor will it contribute to that sense of well-being, even pride, that you should have as one of the major satisfactions of home-owning. But beauty is not a matter of traditional or authentic "period" style. It is rather a matter of proportions, of shapes, of relationships of parts one to another,

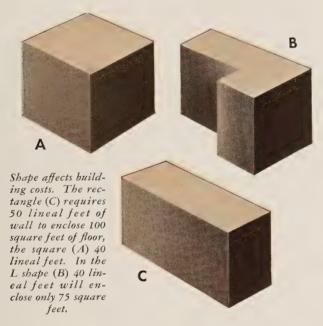
of color and texture and material, of appropriateness of these to their particular purposes. In this, again, your architect or contractor will be able to take the elements of your rough plans and mould them into a unified well-proportioned whole, each detail, each part, designed to contribute to the desired effect. In may well be that you will want to sacrifice any preconceived idea of a particular style in order to get many of the desirable features and added livability by arrangements that would be impossible in the strait-jacket of a specific traditional "period." But your house can still have real style in the true sense of the word, and be sleek, distinctive, and gracious. As an experienced dress designer can design a more becoming, appropriate and beautiful gown for you than you could create for yourself, so the experienced building-designer can produce a home for you that will suit your every need, including your need to feel "at home" in your new house.





That First Rough Sketch. The first sketch should begin with the lot lines showing the shape and size of the lot at a definite scale. If full one-eighth inch scale seems too large you can assume that each square of your cross-section paper equals two feet or even four feet instead of one foot. Next, put on accurate points of the compass, as shown in the diagram. Next, indicate where the streets or roads are, then note direction of prevailing winds, the best view, and other physical features of the lot.

Without attempting to make a definite shape for your house, indicate in a general way: (see diagram) the best location for each main room noting the desired exposures for each room. This will help you locate your garden, your entrance approach, and your driveway to the garage—and you are off to a proper start! Your "orientation" will be right.



Space and Its Cost. Since planning is arranging space, and building is enclosing space, we might consider first the controlling geometric principles, for these have a bearing on the economy of construction. Geometrically speaking, the sphere encloses the most space for a given exterior surface. Next would come the cube. The simple rectangular block is the most economical practical shape for the house as it gives the most interior space for the minimum of exterior wall. And exterior walls are the most expensive part of the house cover. A glance at the diagram will show that one hundred square feet of floor area can be enclosed by forty linear feet of wall if the shape is square. The same one hundred

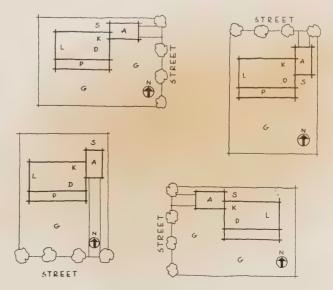
dred square feet of area requires fifty feet of wall if the sides are respectively five feet and twenty. The increase in the cost of the wall therefore would be 25%. You will also note that an L-shaped plan encloses only 75% of the floor area of the square plan having the same length of exterior wall.

Every jog or break or intersecting edge is more expensive to construct than a straight continuous wall, and, therefore, adds to the cost.

However, in most instances, it is desirable to use an L, T, U, or H-shape plan for its advantages in additional exposures for each room and for the flexibility in arrangement in these freer shapes. Also, it should be remembered, the cost of the cover of the house—that is, exterior walls and roof—is about 50% of the total cost of the house. It is a good principle to keep the shape of the house simple.

Planning and the Site. There are two ways of starting your planning. First, if you have already purchased the lot, you can start with the known lot conditions and plan your house to take advantage of them. Second, if you have no lot, you can plan the house to suit your needs and desires and then search for the lot that suits the predetermined plan in regard to location of streets, points of the compass, views, prevailing breezes, and all that. Of course, you can change your house plan to fit the almost-perfect lot you find. The diagrams show how the lot affects the placing of the various rooms so that they will have the most desirable exposures.

Plan your house to take advantage of lot conditions such as location of streets, points of compass, views, privacy, prevailing breezes, etc., and place each room for desirable exposure.



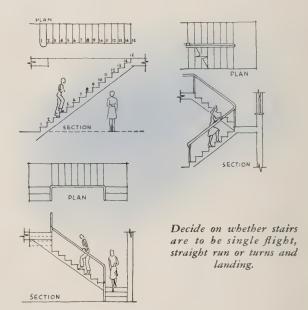


Being all on one floor is mighty convenient, and a bouse that hugs the ground can be very attractive.

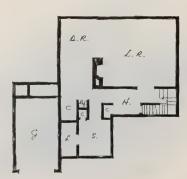
A small house two stories high, usually can be improved in appearance by a garage and porch at either end.

How Many Stories? You should decide now whether your first scheme is to be a house of one or two stories. This is largely a matter of personal preference. Being all on one floor is mighty convenient, and a house that hugs the ground can be very attractive in appearance. A very small house, two stories high, usually "sticks up in the air" too much, although a garage at one end and a porch at the other by broadening the base, may improve its appearance. The two-story house may be slightly more economical for it will require both minimum foundation and minimum roofing to enclose the same amount of space, while having the same amount of exterior wall as the one-story house. It also leaves more room on the lot for garden, lawn or terrace.

Having decided on one or the other (or having decided to try both and then choose the one you



First, roughly draw out a plan on your cross section paper to scale.



like best, or that best suits your lot), the next step is to make a more definite plan on your cross-section paper. You will probably have plan illustrations from magazines showing in general the type of plan you think will suit. Draw out a plan on your cross-section paper to scale to see how it works on your lot, and how it corresponds to the locations of the various rooms you indicated on your first rough plan. You may have to reverse or "flop-over" your model plan chosen from the magazine or from the plans in this or other books in order to make the rooms come in the proper places.





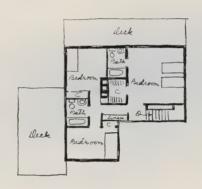
If you want a two-story house work out the first floor first and locate stairs.

Planning the First Floor First. If you are working on a two-story scheme, work out the first floor plan first. Locate the stairs and show whether or not it is a single flight, straight run, or whether there should be turns and landings. (See diagrams.)

Having decided tentatively the first floor plan (and stairs) place tracing paper over the plan and sketch in the upstairs bedrooms and bath or baths. Remember, that the stair must come in the same place on both plans. For the sake of economy, it is good practice to place upstairs baths over the kitchen so that only one plumbing stack will be necessary, thus saving pipe and labor. Remember, too, that

the chimney must be in the same location on the second floor as on the first, for it must be built straight up from foundation to roof.

Room Shapes and Sizes. In this preliminary planning you should deal only with the room shapes and approximate sizes, leaving until later the location of windows and doors. Your object is to relate the rooms properly to each other and to the lot and to get them of the proper size and shape to accommodate their activities and their furniture. This process should be repeated, trying out different schemes which appeal to you, perhaps taken from different plans you like.



Place tracing paper over first floor plan and sketch in upstairs layout.



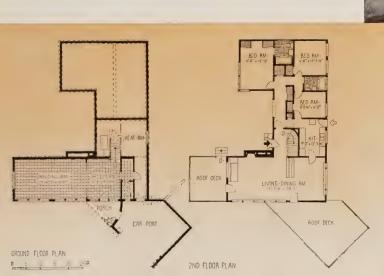




IRNEST PETERSON designs "modern" houses successfully in what is probably the country's strongest center of architectural conservatism. Almost six years ago he did a small subdivision in Falmouth, Mass. In later houses the contemporary approach persisted, but with a growing tendency to adopt the more warm and informal character of the best work in California.

Perhaps the best example of this trend is the house illustrated. Since he was client as well as architect, it presumably expresses his current preferences.

The house was built on a little knoll overlooking Vineyard Sound and it makes excellent use of the drop in grade. Car port, entrance and drafting room are on the lower level, giving the living and sleeping rooms all the privacy they require. The main floor plan is exceedingly well organized, with the stair hall so located that it gives direct access to the bedroom wing, kitchen and living room without interfering with activities in any of them.

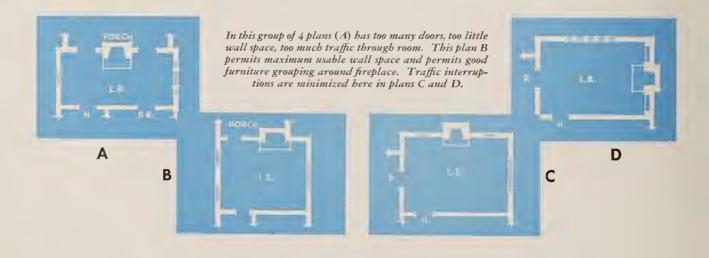


The architect installed radiant heating (illustration above) more or less as an experiment, and reports favorably on its operation. His comments are interesting: "I find that a thermostat setting of 60° to 62° is satisfactory in the bedroom zone. In the living room, where we have a large glass area, a setting of 68° is normally required. At no time have we found floors uncomfortably warm, even with $a-15^{\circ}$ temperature. I plan to use it in four postwar jobs which are now in the plan stage."

Planning the Rooms

The natural place to start is with the living room for that is the social center of the home. The important thing is to plan for the placing of the furniture for each and every activity, both individual and group activity. The shape of the room, as well as its size and the disposition of doors and windows, is extremely important in gaining the maximum comfort and usability. Avoid making the living room a traffic artery in getting from one place to another. It is well to go

over the list of activities and the related necessary furniture, facilities or paraphernalia, to see that there is a place for everything and everything in its place. You will have to ask yourself questions, such as, "Where will we put the bridge table when just the Joneses come in, and when we are having a party of three or four tables?" Also, "Where will we store those extra tables and folding chairs conveniently, yet out of the way?" "Where will the radio be most conveniently placed so that we will not have to get



Jetá plan a PEACETIME HOME

up every time we want a new program?" "Where can we sit to enjoy the best view of the garden or keep an eye on Sally in her playpen?" "Where will the movie screen be best placed so that all can see our vacation pictures, and where will the projector

go?" "Is there a place for the new television set we will have?" "Where will Jim's favorite chair be placed in relation to the fireplace for a quiet evening's reading or conversation?" "Will the room be convenient when the club committee comes to tea. to gossip, or to discuss less weighty matters?"

And last, but most important of all, "Will the furniture fit in such a way as not to interfere with the heating system?" "Will your davenport, bookcase or chest of drawers be placed so that it will not cut off a warm air register or a cold air return?" "Will the kind of radiators you use or their location interfere with good room arrangement?" The time to decide these important points is before the final plans are made and the pipes or ducts laid out for your heating system. These questions are all part of planning the house for your way of living.

Van Evera Bailey, A.I.A.—Architect



Start with the living room. Plan the placing of the furniture for family and social activities. The shape of the room, its size and the disposition of doors and windows are extremely important in gaining maximum comfort and visibility.



You can save many

steps and much time with a "Pass Cabi-

net" between kitch-

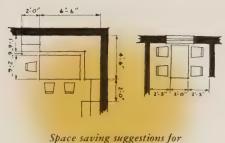
en and dining room.

NATURALLY, the first decision is whether to have a dining room or not, whether to combine it with the living room, or with the kitchen. If the decision is to have a dining room, what is to be the maximum number of persons at table? What other furniture will be required in the dining room? Where can the chairs be placed when there are only two or four at the table? Is the dining room to be formal or informal? Can we save space by constructing a banquette or seat along one side of the room or in a corner? What other uses shall we count on for the dining room, poker games, Junior's studying, or for cutting out dress patterns? Answers to questions like these are important in planning, for they determine the size, shape, character, and location of the room and its furnishings.

The relationship between dining room and kitchen should be as direct and convenient as possible. There are many opportunities for both attractive and ingenious arrangements of the wall between kitchen and dining room. Many steps and

Jets plan a PENCETIME HOME

much time can be saved by making this wall a "Pass Cabinet" provided with counter, shelves, and drawers that are available from both the kitchen and the dining room sides. Dishes, glassware, and silver can be placed in the "Pass Cabinet" from the kitchen side, as they are washed. They are then available from the dining room side for table setting for the next meal, thus eliminating the constant traffic back and forth between kitchen and dining room.



Space saving suggestions for combination living-dining rooms.

Planning of the Kitchen for economy of time and effort is a special scientific problem that is considered in detail in another chapter. (See pages 46 to 58)



As someone has said, "If it were not for the bed, the bedroom would be so easy to plan." Modern planners, however, have improved the attractiveness and usefulness of the bedroom by departing from the traditional headboard-at-the-wall-in-the-middle idea. The diagrams on page 30 show how space is gained by varying the position of the bed and how much more convenient access to bath,

wardrobes, closets, and hall can be, when one does not have to take a tour around the bed to get from one place to another.

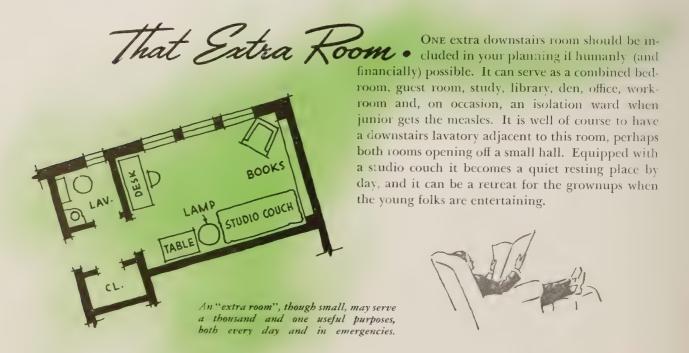
Each bedroom is a "home of one's own" to each particular member of the family. As such, it should provide the necessary seclusion from sight or sound and be comfortable for quiet reading, writing, studying or complete rest.



The above diagrams show how varying positions of beds can provide convenient access to bath, wardrobes, closets and hall.

Especially important in connection with each bedroom is the storage space. Too frequently the closet, two feet deep by three feet wide, is indicated on the plans and we let it go at that. Nothing is more essential to the sense of well-being of the person whose room it is than to have a place for each and every one of his or her cherished possessions, whether it's the daughter's little library of selected books, the boy's collection of rocks or stamps,

or the father's guns, fishing rods, or even pipes. It is therefore up to you as owner, and planner of your own home to make sure that adequate closets and storage spaces are provided in each bedroom. Closets carefully planned in the first place for the clothes and possessions of the occupant of the room save space by using it wisely, as well as conserving time and energy in using the things stored, and saving wear and tear on the things themselves.





Above—Courtesy United States Gypsum Co. Below—Burnham Hoyt—Architect

Wille it is possible to get along with one bathroom for a family, and our ancestors got along without any in the house, it is advisable to have at least two lavatories, two toilets, one bathtub and a shower. The shower and the bathtub can, of course, be combined. A downstairs lavatory, with a toilet, is a convenience that amounts to a necessity with some families. It saves much time and discomfort as far as children are concerned, and is of great advantage when one has guests. If possible, the downstairs lavatory should be under an upstairs bath, or adjacent to the kitchen in order to utilize a single plumbing stack and to have the shortest horizontal runs of pipe. However it is much more important to plan these things where you want them than to put up with an inconvenient arrangement

for years for the sake of saving a few dollars' worth

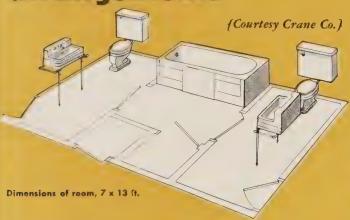
Bathrooms are not difficult to plan for they have standardized fixtures without great range in size. Some typical arrangements of bathroom fixtures are shown in the diagram, while some minimum baths are shown. An ample size bath is a joy forever, whether or not it is a thing of beauty. In planning your own bathroom, don't make the mistake of merely providing one little standard medicine cabinet. If possible (and it usually is if you and your architect are the least ingenious) include a closet or good-sized cabinet for the storing of linen, soap, bath and cleaning equipment, and other accessories. Frequently a soiled-clothes bin can occupy the lower portion of this bathroom closet. As you will see in the diagrams, the placing of doors and windows is especially important in bathrooms.

If there is only one bath, this naturally must be accessible from the hall. If you plan to have two baths, one may be entirely private and accessible only to the master bedroom, or, and perhaps more desirably, it can be placed en suite between two bedrooms. The latter arrangement is a great convenience in caring for children or in case of illness.

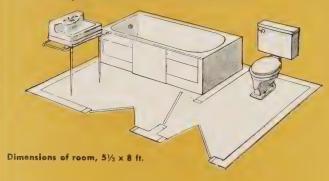
let's take a look at

N C W bathroom

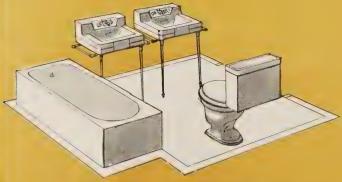
arrangements



THE DOUBLE-DUTY BATH. The double-duty bath occupies small space and yet gives many of the conveniences of two complete bathrooms. Here a single tub is flanked by a lavatory and closet in separate rooms at each end. This is an ideal arrangement where space is limited and the family is large.



THE CLOSET COMPARTMENT. In this arrangement, only three plumbing fixtures are used. The closet is installed in a separate compartment. The advantages of such an arrangement are obvious. An additional lavatory installed with the closet would further increase the usefulness of this bathroom arrangement.



Dimensions of room, 6 x 61/2 ft.

When you are planning your bathroom, why not consider a more unconventional arrangement—one that may suit your family need better?

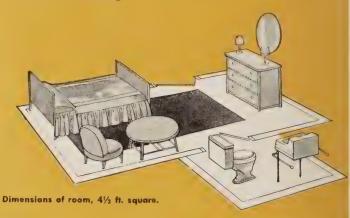
For instance, the Double-Duty Bathroom, shown below (left), will give you many of the advantages of two bathrooms with only the addition of a closet and lavatory. Or the closet might be placed in a separate compartment, permitting access to the bathtub and lavatory while the closet is in use.

Twin lavatories or the addition of a dental lavatory might solve a traffic problem in your home. Or you might like to have a separate shower stall in addition to the tub, for greater convenience.

On this page are shown practical layouts that may help you plan a bathroom suitable for your needs.



THE NARROW BATHROOM. The end of a hall or an unused closet offers the possibility of installing a second bathroom. If this space is too narrow to hold a regular size bathtub, the Receptor Bath is ideal for such an installation. Measuring only 4' by 3'10" but with the bathing space set on the bias, it gives the advantages of a full 5½-foot length tub. The Receptor is also ideal for shower bathing.



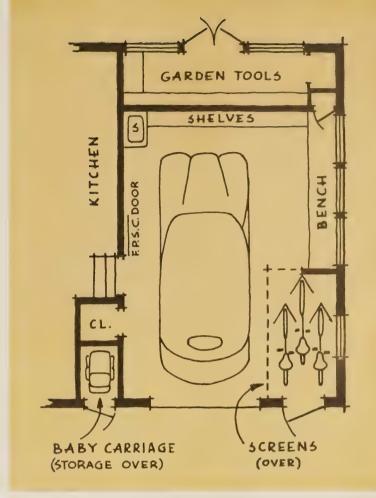
BEDROOM LAVATORY. Think of the convenience of a lavatory and closet connected with your bedroom. The space required is small—in fact, a clothes closet is all you need. Not only does the bedroom lavatory offer the advantages of a private bath, but it lessens congestion in the main bathroom.

THE TWIN LAVATORY BATH. With a large family, this arrangement will help speed the children to school—father to the office. Two lavatories will give many advantages of a second bathroom and requires but little more room than a more formal arrangement.

the garage

• The garage is definitely a part of the house planning. It should be convenient to the kitchen as there is so much cash-and-carry shopping to be done. In northern climates it is well to place it as near the street as possible to avoid excess snow shoveling.

Avoid making your garage too small. Cars have been getting longer though they may now have reached their maximum. And you do need space to get around at least two sides of the car. Passengers should be able to alight from either side in the garage, with room enough to prevent the car doors from banging against the wall or objects stored. If well planned, your garage can also provide designated space for bicycles, baby carriages, children's express wagons, and many other bulky things which should be out of the way yet easily accessible at ground level. The latter, of course, includes space for the lawn mower, rakes, and other garden implements, and coils of garden hose. Be sure to include a cold-water tap as a convenience in the garage. Sometimes it is well to include a workbench and places for such things as ladders, work-clothes, snow shovels, etc. In other words, plan your garage with a known space for all those purposes and all those things that you might forget if you had not first thought things through in making your check list.



If well planned, your garage can provide storage space for many bulky things which should be out of sight, yet easily accessible.



the basement

Courtesy U. S. Gypsum Company





HERE are advantages and disadvantages to basements. Your decision for a basement should be based upon the lot location terrain, climatic conditions and your way of living.

Basement walls are more expensive than mere foundations of a depth only to exceed the frost line and, too, unless they are properly drained they will be damp or flood. (Be sure to damp-proof and water-proof your basement.)



Basements should be designed with plenty of window space so that they will be light and adequately ventilated. Basements have distinct advantages too. Most of the simplest current types of "gravity" heating equipment operate best and most economically with the furnace or boiler in the basement, out of the way. In this location it never occupies space that might be more advantageously used by other rooms, never blocks out a view, or a breeze, or light. The basement is a convenient and usually even-temperatured place for storage of many kinds (and we have never heard of a home-owner complaining about too much storage space). The basement is also useful for workshop and hobby activities, for tools and workbench, or for a darkroom. It's a good place, too, for a rumpus room, for the more strenuous or active entertaining and games, the ping-pong table, shuffleboard, and other noisy goings-on.

Moreover, the comparatively even temperature of the basement all the year around makes it a good place for storage of food, for garden produce and for the quick-freeze cabinet, if you have one. Unused or to-be-mended furniture and furnishings are out of the way in the basement, and so are the storm sashes in the summer and the screens in winter.

Of course, it is quite necessary that furnishings and equipment be protected, and the cleanliness and compactness of fully automatic gas as a heating fuel with Janitrol Winter Air Conditioning is an assurance that play and hobby rooms will be kept spic and span.—The Publishers



Your basement can be as clean, as livable and attractive as any room in your house with proper planning and decorating. The many advantages of automatic gas heat permit full use of the basement for recreation room, hobby center or playroom for children

These illustrations show a few of many possibilities in equipment and originality used in planning recreation and hobby rooms.



where will the furniture go?

ON YOUR rough plans you can try various furniture arrangements. This may be done by rough sketches or cutouts of various pieces of furniture which you can move around on the scale plan to suit your own convenience and fancy. You can make cutouts at the proper scale showing exact sizes of pieces of furniture you now have or expect to buy. This furniture layout will help you locate windows and doors and insure your having the proper space and clearance and relationships within your rooms.

You cannot expect to arrive at the proper solution on the first, or even the second or third try. You will find you will have to make many compromises from your ideal solution. To gain an advantage in one place, you may have to sacrifice space or con-



venience of arrangement in another. All through your planning you should imagine that you are living in the house, planning how you get from here to there, what you will be doing in this area in the morning, in the afternoon and in the evening. But this is all part of the fun of planning.



plan for future additions

Before getting too far with the planning, it is time to consider possible enlargements of the house later on, if you think you may want additions. Trace out on your rough plan where you would add another room, bath, terrace, porch; or how you would enlarge a room by taking out a partition or extending an exterior wall.

working within your budget

Mosr everyone, after drawing up his preliminary plans of the house he wants, finds that his desires are a bit bigger than his budget. One way of estimating the cost is to calculate the number of cubic feet in the house by multiplying the entire first floor area, including walls, by the average height of the house from basement floor to half the height of the attic. This gives you the "cubage" which can be multiplied by the average cost per cubic foot in your locality at the current time. Ask your architect or builder for current rates. This, of course, is only a rough estimate of cost of construction. It is wise to get an architect or builder to check your preliminary estimate before going further, for you may need to make drastic revisions. This suggests replanning for more intensive use of space or, as it's termed, "multi-use" of rooms. The dining room is usually the least used space. Very attractive homes can be made by combining the dining room with the living room, or with the kitchen. The kitchendining-room is a revival of an old practice that has many possibilities. Rooms of combined uses add a



Don't guess on costs. Get current rates from your architect or builder to be sure you are staying within your budget,

pleasant sense of spaciousness which is lacking in a home that is all cut up into little rooms.

This sense of space and freedom is especially important in a small house. It can be gained by proper disposition of the elements of the room such as doors, windows, furniture, and fireplace. Large windows, properly disposed, increase apparent size. Fewer doors, and doors properly grouped, increase both apparent size and usable space. Large mirrors will do wonders also in adding light and openness to the effect.

help when you need it

IN ALL this planning, you are arriving at the kind of home that is suited to your own needs and desires, and you should not, at this stage, worry too much about appearances. If you have developed a logical series of areas or rooms, arranged for their particular purposes, and to take advantage of the features of the site, you can be sure that it can be made attractive in external appearance. Your architect can show you how this is always possible. He will undoubtedly be able to suggest changes which will make the house both more livable and more efficient. His knowledge of structural necessities will suggest such changes as may be necessary to make the house more economical to build, more structurally sound, and more free from maintenance and operating expense. You cannot do better than to consult authorities at an early stage in your planning, for they can save you many headaches and heartaches later. They know the pitfalls and all the common errors and can speed you on your way in planning the home you really want.

The interior of your house will not be ready even though all your furnishings are provided—until your mechanical equipment is installed. And it's therefore your further assignment to choose your equipment wisely. Upon your choice will depend the efficiency of your kitchen, the value of your laundry, the leisure, comfort and good health to be enjoyed.

We recommend that you plan a "New Freedom" Gas Home—then one fuel will serve for refrigeration, for cooking, for heating the water—and for house-heating. Four major services—one bill (which you don't pay until after service is rendered). No nuisance of delivery or storage—no furnace-tending and a minimum of service charges—Publishers' Note



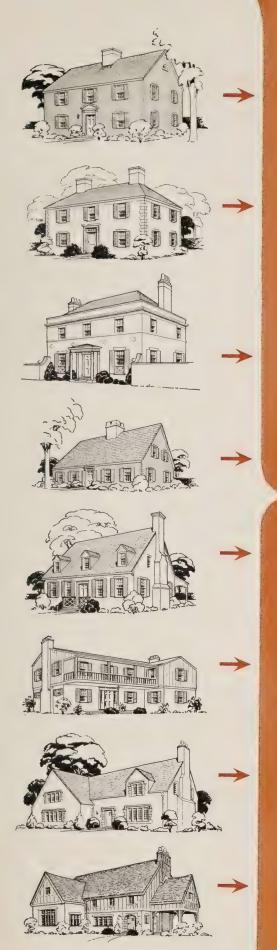
Name of the state both the pleasure and pride you will take in your house are partly dependent on its appearance. Style itself is dependent on the disposition of the masses of the house and the proportions of its various parts and features to one another, and on both functional and decorative details. It is more important that the proportions, colors, textures, and materials be pleasing, than that the house be detailed in any particular named period style. It takes a skilled and experienced designer to produce a distinguished house that has real style. Mere use of copies of period moldings, windows, cornices, or other details does not produce the desired effect. It is the careful proportioning and relating of one part to another that gives unity and harmony to the design.

It is only in recent years that home builders have faced the problem of what style to select. Everyone formerly built in the current style of the period in which they lived. Now we are faced with the problem of choosing a particular style for our homes. The particular style, or period, is usually chosen for one of the following reasons:

- **A**—Because you just like it, it seems homey. It is what you want because of familiarity and past associations.
- **B**—Because at the moment, it is the preferred style of the set you travel with, and you don't want to be different.
- **C**—Because you do want to be different.
- **D**—Because someone you admire and emulate has a house in that style.
- **E**—Because it will take its place best with its neighbors, in harmony with surroundings.
- **F**—Because property or community restrictions dictate, at least in general, the style you can build.
- **G**—Because the lending or mortgage insurance agency dictates the style it will finance.

They are all good reasons and it may be that yours will be a combination of several.

Within any one of the so-called period styles, there is room for great variety in size, plan, and detail, but the character and spirit of the design are well marked. Today there are fewer purists who demand exact copies of historic houses.



New England Colonial

This is the familiar New England Farmhouse type dating from the 18th century. Ceiling heights were usually low and the plan four square. Usually it had a large central chimney serving several fireplaces. Windows were small and many-paned. It was simple except for an inviting treatment of the doorway.

Georgian

This style was so named because its design was derived from English precedents under the reigning Georges. The American adaptations were noted for refinement of detail of cornices, moldings, doorways, and interior trim. The prosperous colonies in the late 18th century could afford more elaborate architecture. Two or four chimneys replaced the frugal central chimney of the earlier period.

Regency

This type derived from the style current in England when the Prince of Wales was regent for George III, 1811–1820. It is noted for refinement of detail, greater restraint, slender proportions and delicacy in design. The parapet was frequently used above the cornice instead of the straight hip or gable roof of the earlier periods.

Cape Cod

This well known American type is a simple one-story Colonial with either a gable or gambrel roof, fitting snugly to the ground, with a large expanse of shingled roof.

Williamsburg Colonial

This style is characterized by interesting brick work, often with elaborate chimneys. The roof was usually steeply pitched, and dormers were narrow and steep gabled. Note the flush boarding of the dormer windows running parallel to the roof slope.

Monterey

By contrast, the Monterey has a gently sloping roof, for it hails from the southwest, where snow is not a problem. The board and batten interior treatment and overhanging second floor balcony is typical. It frequently shows Spanish influence in thick masonry and stucco walls for the first story and in the chimney design.

Cotswold

This is one of the styles usually characterized as English. It is adapted from the Cotswold district in the west of England. Stone was the natural building material, and many of the details are Gothic or Tudor. It is picturesque and often rambling in plane of the details are Gothic or Tudor.

English Half Timber

In this we have an adaptation of medieval English architecture in which the main supporting timbers were exposed and filled in with brick, or sometimes stuccoed. Unless very cleverly handled in both proportions and detail, becomes incongruous rather than charming. Windows were usually casement with leaded glass, or thin wood mullions.

Letá plan a PEACETIME HOME•

Your house would probably adapt one of the so-called period styles or be individually modern. The modifications of a style must be skillfully handled to be pleasing, and this means the design must be produced by a trained and capable professional designer. Ill-proportioned ugliness may easily result from attempts to combine details from various

sources, even though all are derived from authentic period precedent.

Period styles most popular today are illustrated on the preceding page, with some comments on their characteristics. Care should be taken in the selection of the style to see that it can be adapted to the plan you work out as being best for you.



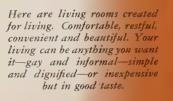


To create a real living room you must create a background which will encourage growth of all that is friendly and fine in you and your family.

It's high time we treated living rooms to the same techniques which have been used so successfully to modernize kitchens. Admittedly, it's a harder job. Everyone knows the kitchen is a room where we do things. That's its reason for being. But, how many people really know what a living room is for?

Its very name implies a room overflowing with life and activity, but the sad truth is that the average living room is equipped for only two activities: just sitting, and sitting and listening to the radio. Even to sit and read with comfort would require more and better light than is usually available, as well as more easily reached reading material. Most living rooms don't even encourage conversation. The furniture isn't arranged for it and the atmosphere is often too drab and uninteresting.





Samuel Marx-Architect



George Fred Keck-Architect

arrange furniture for use

In Your own living room you may want to sew, play games, dance, read, play a musical instrument, listen to the radio, study, entertain, display collections, dine. Varied as this list may be you'll find that usually just four basic types of equipment are required: seats, tables, storage facilities, and light.

storage, spaced and shelved inside to suit your special requirements, is the modern answer to convenient living.



Sects • Have enough chairs and sofas to seat the number of people who make frequent use of the room, and place them where they'll be most useful. For years, furniture has been grouped closely around the fireplace; but now our fine heating systems, which make every part of a room comfortably warm, are easing this sharp focus. Of course, fireplaces are still important to pleasant living, but other parts of the room also rate as conversation centers.



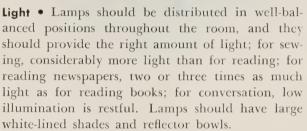
Tables • There are two basic table heights. Tables used with straight chairs should be twenty-eight to thirty inches high; tables used with lounge chairs may be eighteen to twenty-four inches high. A few large tables are more convenient than five or six small tables. One large low one may serve the sitting area, and one high one may qualify for meals, writing and games. A folding game table is an added convenience.



Storage • Books need widely varied shelving, both shallow and deep, with spaces for portfolios and scrapbooks. You may also need space in the living room to store equipment for

- ★ Writing (typewriter, paper, envelopes, reference material, files, lap board)
- ★ Sewing (machine, clothes to be mended, mending basket, work table)
- ★ Games (special tables, assorted boxes holding games)
- ★ Dining (china, glass, silver and linen)
- ★ Hobbies (varies with hobby)
- ★ Decorating (figurines, vases, pictures)

Obviously, open shelves will not serve to store such miscellaneous collections. One wall devoted to



In addition to close light for close work, there should be enough general light from fixtures or reflector bowls to smooth out the contrast between a bright pool of light and surrounding darkness.

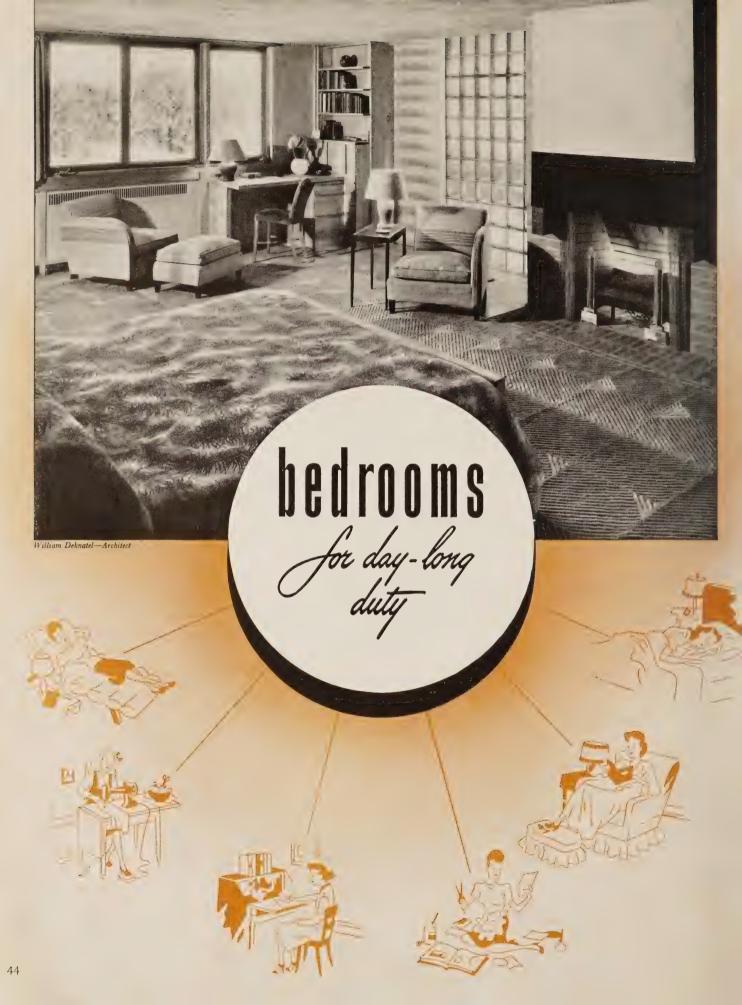


Personality Plus • With the living room's usefulness planned for, you go one step further and add to its individual character by choosing colors, textures, furnishings and accessories which reflect your family's tastes and their ambitions.

Infinite variety is possible. Should the room be gay and informal—or simple and dignified—or inexpensive but sophisticated—or solid and conservative—or unusual and imaginative?

If there is a clash between your personal likes and the effect which, for business or professional reasons, you feel you should strive for, make an honest choice and abide by it. In decorating a room, consistency really is a jewel.

This vital approach to decorating offers double rewards. All through the planning stages you're getting a richer understanding of yourself and your family—as you are and as you'd like to grow to be. And when the paper plans turn into an actual living room, you'll discover that it has that warm livedin quality which is the best possible background for happy living.





pretty much for granted. But now she knows how lucky she is to have a room where, even in the winter, she can read without bundling up in a blanket, day-dream over her letter-writing, or sit for hours trying to make herself over in the image of her favorite movie actress.

At night, Mary Jane turns sociable and invites the gang in to dance and play games in the living room—and that's when Mother and Dad are glad they can escape to *their* bedroom, with its comfortable lounge chairs, good reading lamps and small radio.

Granny, whose spirit is as strong as her body is frail, eats early breakfast, waters her thriving plants, dusts her collection of coral and shells, shows Mary Jane how to make tiny tucks on the sewing machine, entertains the minister—all without leaving the bedroom which is her cherished domain.

Let the Bedroom Express Your Personality. In looks, as well as in performance, your bedroom can be more personal, more self-revealing, more individual than any other room in the house. It's the ideal place for photographs and snap-shots, for displaying prized collections and trophies, for filling a bulletin board with constantly changing notations and clippings which may have significance for you only.

But before you start on the background, locate the place where you want the bed or beds. The bed is still the most important thing in the room. To free more space for work or play, you may want to use couch beds, placed end to end, with or without a table between them; or at right angles in a corner, with or without a square table dividing them; or close together, as one bed, with a table on each side; or in opposite corners of a room. For comfort's sake, make sure the bed is the right width and length for the person who will sleep on it.

Good Grooming Starts Here. If you're going to put your best foot—and your best face—forward, you'll need plenty of room to store your belongings. In a master bedroom, closet storage is as important as chest storage. Two chests are desirable, but two closets are almost a necessity.

If closets have not been provided, it is frequently possible to build them in. It may even be worth while to cut off one whole corner of a room in order to make additional closet space. Storage space may also be increased by building-in shallow hat or shoe cupboards on both sides of the head of the bed, thus forming an alcove for the bed.

Good lighting also helps to promote poise and good grooming. Every bedroom should have a shaded ceiling fixture, to give general light for dressing and for locating lost articles. There should also be close light at a mirror, for primping; at the head of the bed for convenience at night as well as for reading; by a desk or chair or wherever close work is done.

The final and exciting step is to personalize the background. Rugs may be room-size or small; walls painted or papered; curtains and bedspreads ruffled or severely tailored. Your problem is to develop a color scheme which will bring day-long pleasure to your eyes.

No one who has experienced the discomfort of a *cold* bedroom needs to be reminded that only the bedroom which is kept comfortably warm *all day* is fit for day-long use.

Modern, automatic house-heating by a Janitrol gas-fired unit will enable you to take advantage of the plan for extending the usefulness of bedrooms.

Courtesy Holabird & Root, Architects









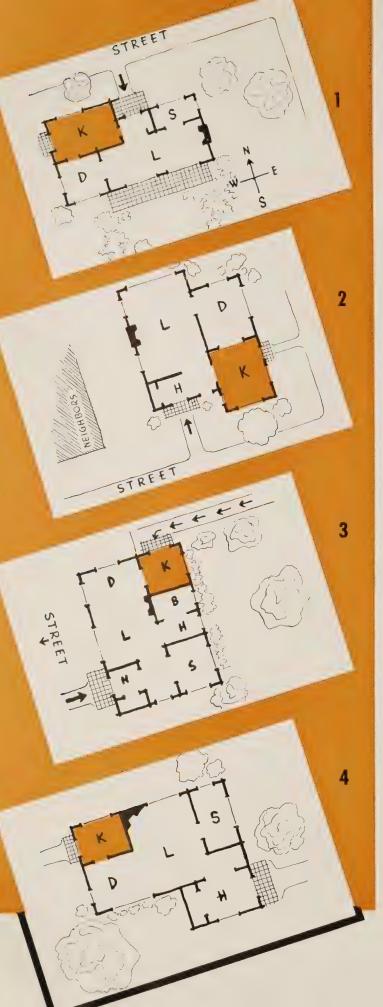


of your planning you must ask yourself: "Where do I want my kitchen?" To save your energy, your time and your disposition, choose the location that best fits your special needs.

House plans are being turned topsy-turvy by new developments in equipment and materials, and also by new consideration for individual living habits. At long last, the rule is that your comfort and conveniences are of prime importance. With this sensible rule in command, furnaces come up from the

basement to hobnob with the refrigerator; laundries also do first-floor duty; and streamlined kitchens move right out front to give first welcome to admiring guests.

Would you like to make the most of this new trend? A good architect will help you develop your ideas, about which rooms go where; but first, of course, you have to go into a huddle with yourself to find out what you and your family really want. For instance . . .



If the southern exposure of your house faces the back of the property, you may want to place the house as near the street as the law allows so you can have your garden, terrace, living room and dining room at the rear where they'll get the maximum winter sunshine and summer shade. This arrangement puts the kitchen handy to the busy front door.

2 If there are close neighbors on one side and your family prefers privacy at mealtime, it's very simple to put the kitchen on the side and the dining room in the rear.

3 If there is an alley or some way for tradespeople to get to the back door without invading a garden party or sun bath, you may decide that the best place for your kitchen is at the back of the house.

4 If you are a sophisticate you may want to tuck your kitchen unobtrusively into a corner of the living room. A famous New England artist and a well-known Hollywood director have done this and the game of "Find-the-Kitchen" is a favorite sport with their guests.

Determine Who's the Boss. Even if you're not yet ready to buy, build or remodel, this flexible thinking about kitchen locations is valuable because it points up the modern interior designer's belief that you must never let your house and its furnishings rule you.

The relocation and integration of rooms has just begun. You'll get the most from all the fascinating changes we're about to see if you remember that the guiding idea behind them is to give you and your family exactly what you want from your home.

Suggestions on step planning

your kitchen

ILLUSTRATIONS ON THIS PAGE FURNISHED THROUGH COURTESY OF CRANE COMPANY

n planning the ideal kitchen, you must consider the space available, the size of your family and what you expect to do in it. Perhaps you may want to use the kitchen for entertaining because it is easy to clean and saves wear and tear on the rest of the house. Or it may conveniently serve as a sewing room or a place for the children to play . . . an excellent place for ironing and light laundry too. Determine all the things you may want to do in your kitchen, and then you can plan one that will best suit your requirements and desires.



TABLE AND CHAIRS



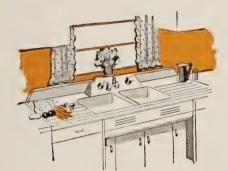
BREAKFAST NOOK



BREAKFAST BAR



FOLDAWAY TABLE



DO YOU WANT A WINDOW ABOVE THE SINK?



DO YOU WANT LOTS OF STORAGE SPACE?



DO YOU WANT A PLACE TO PLAN YOUR WORK?



Courtesy of McCall's Magazine-Carl Koch, Architect, Plan Tech Associates

heart-of-the-home KITCHEN

By Mary Davis Gillies

For complete story on this kitchen, refer to article in the May, 1945 issue of McCall's Magazine by Mary Davis Gillies It has the last word in appliances and it's as efficient as tomorrow . . . but it's as homey as my grand-mother's and as colorful as a bed of tulips. The dining room is only a step through the wide opening, and that toe-warming, barbecue fireplace in the kitchen uses the same flue as the living room fireplace. It's a kitchen to build your house around. That means that rooms must be more flexible, and serve more purposes. Rooms planned for just this or just that don't earn their way. This kitchen which has a dozen uses dramatizes this theme.

There's a table low enough to mix on, good for screwing on the food chopper, and just right for after-supper checkers or chess. Can you imagine kitchen parties here with the men folks broiling a steak over the coals, while you and the girls fix the salad? Can't you see the teen-agers here for their after-movies get-togethers?





Appliances are what you can't do without



HETHER you are making a cake or a kitchen, the ingredients used determine the success of the final product.

On an automobile trip through southern mountains I once saw an old woman taking a pan of biscuits out of a handsome white range with bottled gas for fuel—and that range stood in an open shed!

The close proximity of primitive shed and modern appliance was startling, but the old woman had the right idea. In planning a kitchen today—start with appliances.

For my money, there are three "musts" for the modern kitchen. An automatic refrigerator. (Food that isn't fresh isn't food). An elegant two-drain sink with hot and cold running water. (It is so nice to be clean.) An efficient and beautiful range. (Of course, it's fun to cook over a bonfire or a fireplace, but it is hard on the back.)

Each one of these pieces of major equipment is the nerve center of one of the three chief kitchen activities. In order to receive the most good from the refrigerator, sink and range, each one must be supported by work counters, storage space and small equipment. The charts on the following three pages make clear the requirements of these three centers.

But There's More to lt. Any woman who really knows and understands kitchens realizes that a lot more goes on there than meets the eye of the casual observer. So with the major equipment all lined up, ready to install, it is the time to explore the personal demands you expect to make on your kitchen!



Will meals be served in the kitchen?



Will washing, sewing or ironing be done there?



Will children study or play in the kitchen?



Is there an infant who requires special food formulas?



Do you plan now or in the future to get a frozen food locker or any other appliance listed in the three charts?



Do you want a desk, or planning center in the kitchen?

Consider the Possibility of Including in Your Kitchen Plan:

An automatic system of steriliza-

- tion affecting germs, insects, ver-A wheel table with a warming unit
- * A radio and telephone extension.

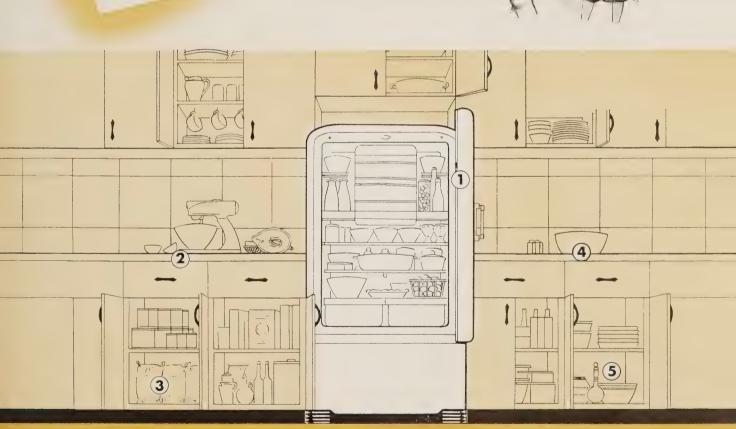
 - Fluorescent lighting and a Bulletin * Communication system with the

 - * Afuel and power system for kitchen and laundry which will be adequate today and will accommodate future
 - * Kitchen ventilation for removal of cooking odors, grease and vapors.

Page the Puzzle Experts. These lists may seem staggering, but if you tackle the job of building them into a kitchen plan exactly as you would a jigsaw puzzle, it is really amazing how many conveniences can be introduced into the area of even a small nine by twelve kitchen.

The important thing about kitchen planning is to think of everything you want to include, while you are still working on paper. Once the carpenters, painters and plumbers move in you become a troublesome, annoying, unreasonable female if you produce last minute ideas.

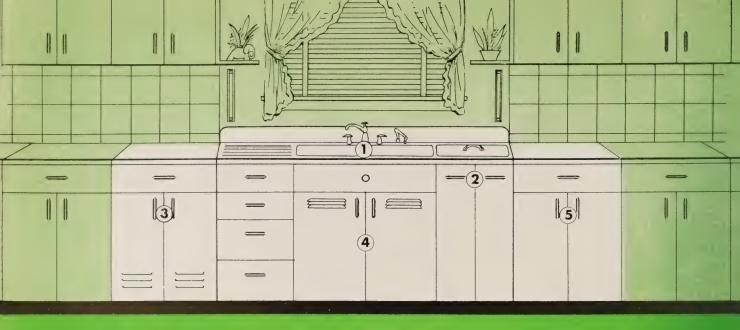
If you haven't already started a kitchen scrapbook ... begin now.



The Refrigerator · Preparation Center

In this center include:

- 1 Refrigerator, door hinged on side away from work surface.
- 2 Work surface (minimum of thirty-six inches) beside refrigerator. Food mixer and juice extractor.
- 3 Wall and lower cabinet storage for dry staples and pots, pans, bowls and cutlery used in mixing cakes, puddings and casseroles.
- 4 Auxiliary work space.
- 5 Salad making supplies.



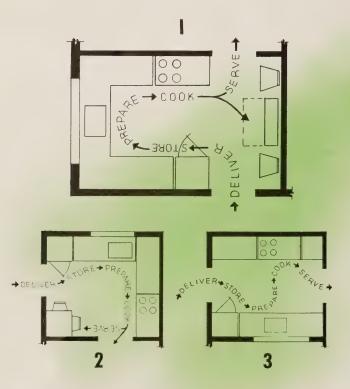
The Sink · Dishwashing Center

In this center include:

- 1 Sink with counters or drains on both sides; nothing is more annoying than a one-armed sink.
- 2 Dish washer and garbage disposer.

- 3 Ventilated storage for vegetables.
- 4 Storage for soaps, cleansers, brushes, dish towels and cutlery used at sink.
- 5 Towel dryer or substitute.

Kitchen Arrangement.



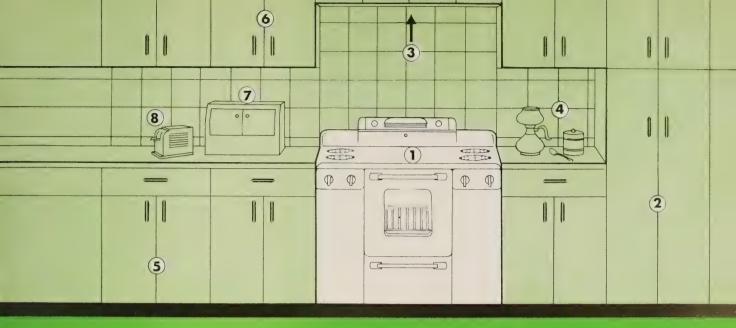
Mix the ingredients together in the right order.

Mona Madhouse and Emma Efficiency were talking over new purchases for their kitchens. "I'm having such fun getting meals these days," chanted Emma. "I never dreamed it could be so easy. I wouldn't trade my new range for a—well for anything."

"Well, I can't say that my new range and refrigerator make much difference," moaned down-in-themouth Mona. "I still spend hours and hours slaving in the kitchen."

"I honestly believe," returned Emma Efficiency, "that you like to slave. If you wanted to save yourself, you would bring your beautiful new refrigerator out of that pantry where you always kept your old icebox and put it beside your work counter. Then you could move the range to the right of the sink. Today it is smart to 'Use your head and save your heels'."

In those few words Emma Efficiency told the whole story of kitchen planning. It helps to have fine appliances, but for maximum convenience, the three centers must be placed in logical order 1-2-3, Refrigerator—Sink—Range with linking storage and counters.



The Range · Serving Center

In this center include:

- 1 The range with a serving counter.
- 2 Tall cupboard for storing pots and pans.
- 3 Ventilator.
- 4 Coffee-making equipment.

- 5 Tray and serving dish storage.
- 6 Seasonings, tea, coffee and cereals used at range.
- 7 Breadbox.
- 8 Toaster.

Alphabetical Arrangements. Probably the most convenient kitchen is the *U shaped plan* (Diagram 1) which supplies continuous storage and counters around three sides of the room. The fourth wall may be used for a dining-planning center.

When a generous dining area is a "must", the L shaped plan (Diagram 2) develops well. This arrangement of centers leaves two walls free for door, window openings and dining tables. Notice, however, that the major appliances follow around the room in the same order as they did in the U plan.

For a long narrow kitchen, the two-wall or parallel kitchen (Diagram 3) arrangement is used in which the two long walls accommodate all appliances, counters and cabinets.

When studying these plans, consider them the ideal. Of course, many variations are possible. Perhaps a door separates the refrigerator-preparation center from the sink and another door separates the sink from the range. If only short distances intervene and if the correct order of placing major appliances is preserved, the kitchen will be relatively convenient.



Snack Bar Service. Also, in the category of "must" is a dinette or snack bar. Be a realist at this point. In your dreams you may see yourself always serving meals elegantly on fine lace with candles; but my personal coast-to-coast kitchen poll has proven to me that many meals are eaten in kitchens. Without fail, include some eating arrangement in



And while you are planning extras don't overlook a good-sized closet for vacuum cleaners, brushes, mops and scrub buckets. No small two by four space will do. Since pantries went out of existence, both builders and architects have been inclined to skimp on this most necessary storage room.

If there is a utility room, the cleaning supply closet may be included there. Other places to consider putting a utility closet are on the back porch, in a back hall or in the kitchen itself.

Tips on Cabinets. When selecting kitchen cabinets you have a double-barreled two-way choice. Your decision will be influenced by your personal taste, the size of your budget as well as by climatic factors.

The first decision to make is a choice of metal or wood cabinets. In a hot humid climate or where vermin are a problem, metal cabinets have decided advantages.

In the field of metal cabinets there are two choices. The finest quality metal cabinets offer every known convenience and tests indicate that they will hold up very well. Of course, such cost more, but may prove to be well worth the extra cost.

Less expensive metal cabinets are satisfactory, but have few advantages over wooden cabinets—and they may prove difficult to refinish. Wooden cabinets also offer alternatives. Choice one would be fine commercial wooden cabinets. These cabinets will offer all of the variations and conveniences available in metal cabinets. Wooden cabinets look well. The finish will not hold up quite as well as the baked enamel metal cabinets, but refinishing them is less of a problem.

Choice two, in the wooden cabinet field, falls to the local carpenter who can do a superior job for a modest cost if you know exactly what you want. But a word of warning: Don't expect the carpenter to be a kitchen planning expert. He will have ideas and can tell you whether or not certain things can be done; but, you should supply him with directions and dimensions and see that he follows your plan.

Desirable cabinet accessories are: Vegetable drawers, condiment racks, adjustable shelves, cutlery trays, serving tray racks, lights built in under wall cabinets, drawer containers for flour and sugar.

Hepsearance theme · color · materials

• Color alone will make a kitchen, but it's better to have a *Theme*, too.

Say, you want a yellow and green kitchen. Right off, that suggests a sunflower kitchen. Before you know it, there is green marbleized linoleum on the floor with a sunflower insert in the center. The walls are splashed with sunflower yellow paint and the dinette corner acquires green leatherette upholstery. The curtains have a green and yellow stripe and the pottery dishes have a sunflower motif. That was easy, wasn't it? When you have both a color scheme and a theme, your decorating questions really answer themselves.

Perhaps you like red—then apples, radishes, roses, tomatoes, geraniums, cherries or strawberries would supply handsome themes. Green or black offers excellent contrast. There's your kitchen, then, with a color scheme all set. There is a black marbleized linoleum floor with a red display line. Note that the linoleum is marbleized; patterned floors may not be quite as handsome as plain ones, but kitchen floors should be practical. The three work walls are painted white and the doors and upholstery are strawberry red. The fourth or dinette wall is covered in a white wallpaper scattered with huge red strawberries. The window valance is a whole row of strawberries, quilted over green curtains. Pot lifters are strawberries too, and the strawberry-decorated pottery breakfast set finishes off the theme.

Blue may be your color; and it's grand for kitchens. Take the theme, for instance, from an old blue painted Swedish clock. Paint the walls soft grey blue. On the floor use brick-red linoleum, the color of the clock lining. Hang blue and red plaid curtains at the window; and finally, if you are handy with a paint brush, decorate the white or yellow furniture with gay Swedish motifs. It is just that easy to add personality to a kitchen.

Colors and themes are interesting to work out, but kitchens must be good performers too. Reduce care and upkeep to a minimum by subjecting everything in your kitchen to a performance check-off.



Kitchen Materials

	Vitala.	en Maleron	10 4
	7 mil	FOR KITCHEN WALL COVERINGS The worth the money if your budget worth the money if your budget	
	•	Handsome, permanent, worth the money if your budget	4
	MATERIALS	Handsome, permanent,	195
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		Tiles and plain finish, Attractive, easy to apply, permanent Attractive, easy to apply permanent	
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(And the state of t	hable types and work country	
	Oil Cloth	Avoid - of perman	
1	Wall Paper	All colors, washable, not F FOR KITCHEN COUNTERS the money if your budget	
	Gloss Paint	Lirable, World	
	MATERIALS	Handsome, dura permits colorful, inexpensive	
	Monel and Stainless Steel	A favorite, handsomer	
1	Linoleum		
	Porcelain	Resembles linoleum r worth the money	
	Pressed Wood	smooth, lustrous,	
	Glass	allors I color, 90	-
	Plastics	EOB KITCH	
··· 81	MATERIA	ALS Colorful, comfortable, practical	
	Linoleum	Colorful, comfortable, practical Colorful, comfortable, practical Colorful, comfortable, practical Practical—can be laid on damp surfaces	
Rubber Floori		ooring significan be last	
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	Brick and	d Tile	
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LAUNDRIES LAUNDRY MINIMUM LAUNDRY

A BRIGHT orderly background, a modern, automatic washer in action—and who even remembers Blue Monday? Dinginess and drudgery have been banished from washday. From the first step to the last, the emphasis is on speed and convenience.*

The first step—and an important one—is to find the best place for your equipment. The trend is away from basement laundries. It is more convenient and more economical to have your laundry on the first floor; and there are several ways this can be accomplished.*

Utility Room. New developments in heating and laundry equipment have created the first floor utility room which opens from the kitchen. It should have an outside entrance, easy-to-clean walls and floor, good ventilation, abundant soft light, and space for:

- 1. An automatic washer
- **2.** One deep sink, for hand washing and flower arrangements
- 3. Abundant and never failing hot water supply
- 4. Ironing equipment
- 5. Drying equipment
- **6.** Soiled clothes container (ventilated)
- 7. Work table
- 8. Storage cupboard
- ★ Furnace (may be in separate compartment)

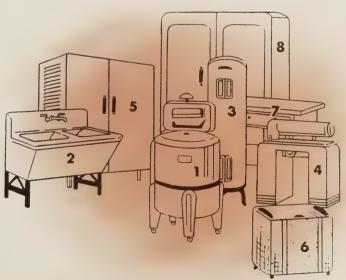
Kitchen Laundry. When space doesn't permit a separate first-floor room, the laundry can be included in the kitchen. It isn't enough, however, to bring a washer and ironer into the kitchen. There should be a definite laundry center, planned so that washing will not interfere with normal kitchen activities. For psychological as well as sanitary reasons, soiled clothes and food preparation should be kept separate.

Locate the kitchen laundry—center near the back door. Place it against a separate wall, in an alcove or in a space cut off from the rest of the kitchen by a half-wall partition or by a snack bar or counter.

Storage space, in either lower or upper cabinets, should be included in the laundry—center for soaps, powders and stain-removal equipment. There should also be a large enamel pan for starching, pyrex bowls for stain removing, and a set of measuring cups, spoons and strainers. To avoid a mix-up with kitchen pots and pans, it's a good idea to have a special color for laundry utensils.

With an automatic washer, laundry trays are not essential. However, a deep sink (slop sink) is a help for pumping water from the washer and for hand washing. It will also prove useful for arranging flowers, wringing out mops and other activities.

Minimum Laundry. If a house plan is analyzed with imagination, space for a laundry can always be found or made out of next to nothing. Minimum laundries can be contrived on porches, in sheds, attics and basements.



Setà plan a PEACETIME HOME.

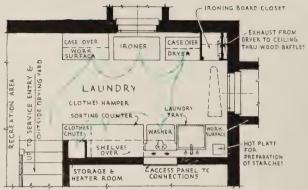
If one of these miscellaneous locations is your laundry lot, don't suffer in silence or develop a martyr complex. Do something constructive. Cheap paint will make the walls fresh and gay, an inexpensive felt-base rug will brighten the floor-and don't overlook a shaded 100-watt lighting fixture. Dim light makes you feel sorry for yourself; and it's hard on your eyes and nerves.

Without much trouble, you can install shelves for soaps and supplies. A secondhand table—presto! -becomes a sorting and stain-removal table.

Assembling and refurnishing your minimum laundry may be a week's work, but it will ease and brighten washday for years—or until your "Dream Laundry" materializes.

TOf course, it is axiomatic that the modern kitchen and laundry must have all the hot water required—at any time needed. Only the automatic gas water heater conveniently and economically provides such service—there are none of the inconveniences inherent in other types of hot water heating, and you get all the clean, hot water needed, at any time you call for it. . . . Publishers' Note

> With laundries like these, washday is never "blue Monday." Modern Equipment, and step-saving arrangement can now move the laundry to the first floor.



Courtesy "Practical Builder"

This plan, with variations, can be adapted to many existing basement spaces. Stress is placed on storage cabinets for supplies. "In-line" arrangement of laundry equipment creates step-saving efficiency as shown by green arrows.

Plans by Morgan Yost, Architect for Bendix Home Appliances, Inc.

Courtesy Tile Manufacturers Assn



Courtesy McCall's Magazine



Never let your house and its furnishings rule you," Mrs. Gillies advises—and this advice is, of course, in line with the modern concept of a home—a place for comfortable, pleasant, civilized living without the inconvenience and work of the old-fashioned home, and the new automatic gas refrigerators and CP [Certified Performance] gas ranges were built to conform to this concept of home living.

The most important kitchen unit is the range. When you install your new CP range you will be taking a big step toward kitchen freedom—and toward better, more economical meals.

The new CP range will be incomparably superior to the old-fashioned type—which, after long years of faithful service has surely earned honorable retirement. As one range manufacturer puts it: "There is as much difference between the new CP range and the old-fashioned gas range as between the first automobiles and their modern successors."

So, let's preview this new CP range—which has been built to the specifications of those who know what they want—the American housewives—as re-

ported in a nationwide consumer preference poll.

This modern marvel, designed to use gas, will be streamlined, durably built and available in a smart 194X design. Its high-speed economy burners will cook more food more quickly and more economically.

"Top cooking" arrangements will include speedsimmer burners. They will light automatically, of course. A signal bell will let you know when cooking is completed.



Jetá plax a PEACETIME HOME



THE HIGHLY favored working space on either side of the top burners will be retained in many of the new models. This is for your greater convenience in preparing meals.

The new CP range will have a well-insulated oven to retain the heat and to save fuel cost; and an oven heat regulator to insure perfect results. You will need simply to dial to right temperature; set the automatic timer to the proper cooking time for a roast or a cake, or a pan of biscuits. When the food is cooked the timer will ring, and you will serve a perfect dish. In the meantime, you will have been freed from your kitchen to do a dozen household chores. The new CP gas range will also have a warming oven and an improved "smokeless broiler" built high in the range for easier access.

It has been reliably estimated that savings effected by the new range will quickly pay its cost in food and fuel economy. And all the time you are earning back the cost of the range, you will be getting superior cooking results, providing better and more nutritious meals for your family at a saving of valuable household time. What more could you ask of any range?

THE NEW and improved gas refrigerator is a symbol of the magic of gas. Tomorrow's gas refrigerator will utilize an improved refrigerating unit using a tiny gas flame as its sole motivating force, housed in a good-looking, well-designed, durably constructed cabinet, with plenty of shelf space, and equipped with thermostatic temperature control.

Capacity of the cabinet and arrangement and roominess of the shelves will enable you to buy provisions in quantity and keep them fresh and wholesome for a long period at a temperature best suited to retention of essential food values. That means better, more nutritious meals.

And you can be sure that the new gas refrigerator, with that tiny gas flame its only motivating force, will be noiseless in operation, economical to use, and that you will have no worry as to its efficient operation.



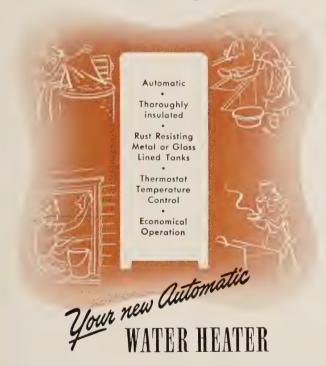
No other home convenience offers so much for so little investment and maintenance cost as fully automatic gas water heater service. The new automatic storage types are beautifully designed with rust resisting metal or glass lined tanks, thoroughly insulated for economical hot water storage, with the water temperature maintained by simple thermostatic control. These units are truly the gift of science to a fuller realization of cleanliness, convenience, comfort and efficient operation of tomorrow's home. Their first cost is reasonable and for only a few cents a day they provide a never failing supply of hot water for bathing, shaving, dishwashing, home laundering, cleaning, window washing and a multitude of household tasks where hot or warm water is needed.



Running water was perhaps the greatest boon to the housewife, for it eliminated endless trips to the pump and the back-breaking water carrying so common a few generations ago. But, our need for hot water is many times that of cold, so, to really enjoy the benefits of running water we must add the convenience of automatic hot water service. And be sure the service is ample-don't skimp on the size of the storage unit for there is nothing more exasperating than a half cold and half warm bath, or sitting around waiting for water to heat by an antiquated, unsatisfactory means when you want to bathe or do the numerous other things for which hot water is needed. The old adage "that you want what you want when you want it" was never more apt than our need for hot water when it's wanted.

There are numerous ways, other than by automatic storage systems, by which hot water may be obtained, but these methods merely save a few dollars on the initial cost and provide inadequate, incomplete and costly hot water service.

It is worthwhile remembering that heating water during winter by means of furnace coils also costs money. In fact, it has been proved by scientific



tests that for every five shovels full of coal used for house-heating, one shovel is used for heating water. And for every five gallons of oil used for house-heating—one gallon is used to heat water. So, with either method you are still paying as much for fuel as you would for automatic service—but not getting the superior service. So, it is wise to provide modern, automatic hot water service the year 'round so that you will always have a supply of the essential

DAILY HOT WATER REQUIREMENTS Av. Temp. Hot Water 140°F. Av. Temp. Cold Water 53°F. EXAMPLE: 2 Adults-1 Child No. Persons Total 6 A.M. 3 7 A.M. Toilet 8 A.M. Dishes 3 1/2 11/2 9 A.M. Laundry 3 4 12 10 A.M. House Cleaning Δ 11 A.M. 2 2 12 A.M. **Toilet** 1 P.M. 2 Dishes 1/2 2 P.M. 3 P.M. 4 PM 3 5 P.M. Toilet 2 1/2 6 P.M. Dishes 3 11/2 7 P.M. 8 P.M. 9 P.M. 10 10 10 P.M. Bath

APPROXIMATE AVERAGE CONSUMPTION

140°F, HOT WATER

Tub Bath (adult)....10 Gal.
Showerbath (overhead)
...........8 Gal.
Showerbath (Needle)24 Gal.
Baby Bath......3 Gal.

38

NOTE: 45 Gal, 160° water is equal to 60 Gal, 140° water 45 Gal, 180° water is equal to 80 Gal, 140° water

Total Gal. 140° water used 24 hours

Increased tank temperatures are not recommended for use excepting on laundry day or for week-end guests. $\,$

commodity on hand when you need it. Surely, if an abundance of hot water is an essential requirement in cleanliness, convenience and comfort for the kitchen, it is an equally essential requirement in servicing bathroom and laundry. By all means, keep the automatic gas water heater on your "must specify list." It's an essential to modern living.

And finally, these three steps to kitchen freedom mean that the whole family will have more comfort, more freedom for leisure—more time, indeed, to enjoy the hours at home. With these three modern gas appliances you will be better able to follow the advice of streamlining your kitchen—and, if you like, to move your kitchen "right out front."

Start your kitchen planning by deciding now on the installation of modern gas appliances.



PERHAPS in a book like this you might expect us to list an array of wonderful new materials and equipment items coming from the magic wartime technology into the peacetime postwar home. It would be possible to write almost endlessly about electronics, plastics, light metals, prefabrication, and their ultimate possibilities. But most of it would necessarily be little but speculation, and it would smack strongly of fantasy.

Our hesitancy in making glamorous predictions is in no wise "selling America short"; it is simply recognition of the fact that it takes time to fully adapt new technological developments to common everyday use. Of course, it is true that advancing technical progress will vastly improve residential construction and equipment. It has been doing just that for a long time. And the process will continue, likely at an accelerated pace, but it not only takes time to adapt new ideas, but costs must be brought into focus with our ability to spend.

In war, with necessity as its mother, invention pushes onward rapidly. Money is no object. Once it has proved its worth, a new development is quickly accepted, rushed through its stages of refinement, hurried into mass production. There is one buyer, the government, and that buyer short-circuits normal processes of technical research, product development, promotion, sales, mass markets. Things simply cannot work that fast in peacetime business economy.

Well Known Improvements. Proof of this—and it is a most significant fact about materials and equipment—lies in the fact that there are already thousands of improvements which are well known and well developed, but which are not yet found in the majority of houses. How many of your friends, for

example, have automatic heat and automatic hot water service? These conveniences have been available for a long time and, of course, no home can remain modern without them. Costs, habits and lack of appreciation are, of course, the explanation.

The family planning its own home should not be misled by statements seeming to suggest that some magic of technology will put all the new and glorious gadgets and available improvements into the low cost house. A livable, low cost house is a real objective of the building industry, an objective already largely realized, but it will be a low cost house, not a \$25,000 one. Every item in it, whether it costs \$25 or \$500, will compete with every other item for inclusion in the specifications.

In other words, you can plan your own postwar house, secure in the knowledge that you need not wait for a technical millennium to make your home practical, livable and fully modern.

Indeed, every family planning a house will want to keep up-to-date on the newer things offered for its comfort and convenience. The manufacturers of building products and equipment have done a substantial share of the research leading toward better homes, and they can be expected to maintain a steady flow of improvements. If there is any lag

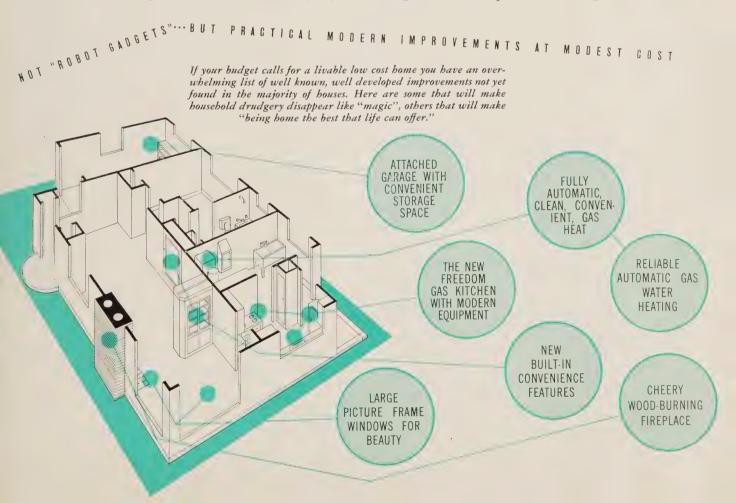
it is more likely to be found, as suggested above, in the absorption of improvements by the market.

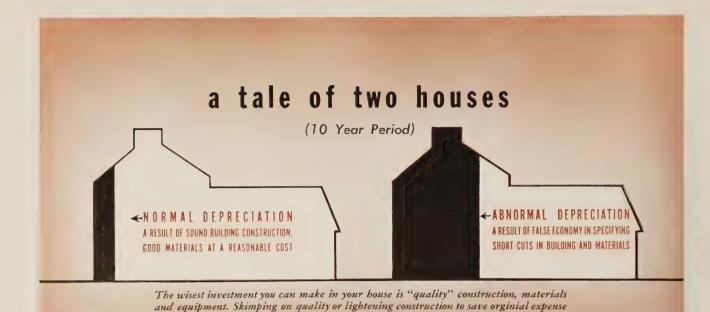
So, the home planner already has an overwhelming list to choose from. How he makes his selection, with the help of his architect and builder, is the really important problem for him.

What About Prefabrication? The progress of prefabrication as a building method has gone steadily forward, accelerated by the war housing needs. The one who plans his own home may well find an increasing array of prefabricated units to further simplify construction and to lower costs—bathroom assemblies, kitchen units, wall panels, and so on. It is simply too early to know with any assurance just what units will be available, and their application to the individually designed home.

The completely prefabricated house will certainly have—already has—important backing in the postwar market. It may be expected to have its greatest success in the low-price market, without any extensive array of built-in equipment, but will include practical, livable improvements.

What about the new materials aside from prefabrication? Obviously we can expect the great new aluminum production plants to investigate the building markets, also producers of magnesium al-





will cost you many times the saving in repair and maintenance bills.

loys, plastics and many others. The present answer can be only very sketchy. Certainly the new materials will find many uses for parts of the house—windows, hardware, plumbing and mechanical equipment. Beyond the obvious ones, however, more exciting applications must await a considerable process of application engineering, involving the now unknown factor of costs.

Good Construction Is An Economy. Insulation and storm windows may seem expensive when you add their costs to an already wobbly budget, but if you do a bit of arithmetic on fuel savings and summer and winter comfort, it begins to appear that you cannot afford to be without them. Or there might be a temptation to lighten construction to save first cost. It is not easy to figure the bills that would result, but they would come—bills for redecorating after plaster cracks have appeared, for jacking up a sagging center wall, or for correcting leakage damage. A good heating system might cost twice as much as a poor one, and still be more economical.

There are a great many items of construction and equipment in which the same reasoning will be found to be sound. The cheap house in terms of total cost might easily turn out to be too expensive to operate; whereas a little more money invested in the same design would actually be far more economical and prove the more sound investment. There are, of course, some in which the accounting process gives the opposite result—the expensive items which do not add to your comfort, conven-

ience or the life of the property which may be costly to maintain. Each item needs its own analysis, and this is where a good architect or building contractor can be very helpful to you in the making of a wise decision.

Save Labor—Save Expense. The same reasoning may be extended beyond the strictly operating and maintenance costs. It applies in many matters of convenience or labor-saving. In many cases, labor-saving devices might prove an economy instead of a luxury. Naturally, it is difficult to work out tangible figures on meals in restaurants, or theater tickets, to appease an over-worked wife. And, there might be some wishful thinking in any such efforts to justify certain items of equipment. There is, nevertheless, a sound basis for giving serious consideration to the over-all picture of family life and expenditures when planning the house for your particular needs. The total of the contractors' estimates is not the final measure of your living costs.

What about lighting? There are many advances in new types of lamps and fixtures. In general, lighting in homes has not seen as many advances as in commercial applications. That is because lighting in the home is more a matter of likes and dislikes than of specific needs, as in the case of factory assembly lines or laboratory processes. Nevertheless, there are already many lighting ideas that could logically be utilized to improve home lighting in the practical sense and to achieve new effects in the artistic sense. In general, however, the trend is rather away from the spectacular lighting, away

from unnecessary sidewall and ceiling fixtures—toward better, more efficient arrangement and pleasing effects.

What about Heating and Air Conditioning? Heating systems have been improving steadily for a long time, and advances have made a solid contribution to better living, not forgetting the rapid extension of the convenience of automatic gas heat and the comfort of filtered and humidified winter air, or the development of radiant heating. Complete year around air conditioning has been one of the familiar items whose general application has been held back by costs. It costs more than winter air conditioning, and it is not likely to be included in the majority of low and medium priced homes except along the gulf states, yet many homes will have some method of summer cooling. Eventually, more and more houses will probably include year around conditioning, for houses are increasingly built for comfort and convenience rather than for size and showiness. (See p. 78.)

Attic Fan. In many sections of the country the home can be kept more comfortable in the summer by means of an attic ventilating fan. A large capacity fan is located in the attic and discharges the hot air through a grille to outdoors. A neat grilled opening is left between the attic space and the rooms below.



In the evening when the night air is cooler the fan is turned on, windows are opened and the fan dispels the warm air from the house and pulls in the cool night air, thus providing a nice breeze. By morning the house temperature has been lowered to a comfortable level and the windows should be closed to keep out the hot daytime air.

Equipment designed especially for this service is available, the cost is not high, and it can be installed when the house is built or added later.



Setá plan a PEACETIME HOME

Your planning should include provision for adding more of the finer things as soon as your income permits. For example, plan for more wiring, for more electrical servants. Plan space for automatic heaters, freezing cabinets, laundry machinery, and so on. That is, of course, plan ahead for them. Include what you need and want and can afford right now, but make at least a space allowance for inclusion of others in the future. No magic will make them cheap in one glorious postwar Utopia, but the American way of life has always steadily brought more and more of them within budgetary range, and nothing has stopped it yet.

Keeping Comfortable. Your house will not be a home unless it is comfortably warm on cold and chilly days, and in many sections of the country there are at least 240 days out of each year when heat is required. All your planning will be directed toward the primary objective of providing comfort. Whether or not you reach that objective depends largely on the effectiveness of the heating system.

Just stop and think of the homes you have seen that were beautifully landscaped. Inside were all the new and modern household appliances. The kitchen was bright and exciting and well planned, while the furniture had been tastefully selected for cheerful appearance and comfortable relaxation. Upstairs the tiled bathroom was a masterpiece, but required a portable heater to keep it warm. The proud owner couldn't comfortably relax in his favorite chair to enjoy winter's scenic beauty, nor enjoy his evening meal, nor relax after a busy day because the temperature in his home rivaled that of the deep freeze unit in the basement. Yes, this owner had stinted on his heating system, and no matter how well appointed his home was inside or out, the prime requisite for good comfortable living was missing.

A wise decision means you can look forward to years of carefree comfort. In arriving at your decision, you must remember, first of all, that the heating plant must have adequate capacity, be properly installed and by all means, fully automatic. When you build or remodel save, if necessary, on those features of the house that can be added later. If construction costs are exceeding the estimates, don't try to save on built-in equipment. Don't skimp on comfort. You cannot get more from your heating plant than it has the capacity to give—any more than you can get a quart out of a pint bottle.

How Much Should Be Allowed for Heating. In setting up the construction budget for your new house, 6% to 91/2% of the total building cost should be set aside for heating, the cost of the heating system depending upon the size and shape of the house and the kind of system selected. The advantages of various systems are discussed briefly on the following pages. While there are differences in method of operation and the type of heating service rendered, this one important fact applies to all-the initial difference in price between a good heating system and one not up to the mark is very little when spread over a period of years. To explain what we mean let's take the case of Mr. X who is building a \$6000.00 house and take the maximum percentage as a heating allowance:

Cost of house	.\$6000.00
Budget allowance for heating plant at 9½% of construction cost	570.00
Interest and amortization on F.H.A. loan on \$570.00 over 20 year period—per month	3.72
If Mr. X squeezes \$150.00 out of heating plant budget, total F.H.A. loan on plant would be	420.00
Interest and amortization on F.H.A. loan on \$420.00 over 20 year period per month	2.73
Savings in interest and amortization on above over 20 year period per month	.99

★ Conclusion: For less than \$1.00 per month, Mr. X can have a good heating system, a heating plant of highest quality, a distribution system of ample capacity to insure comfort in the coldest weather and automatic controls to relieve him of furnace tending. The increased efficiency and economy of such a system will pay for itself as compared with an undersized and necessarily overworked heating plant.



Comfort, as applied to the home, is realized or made possible by those conveniences which contribute to more enjoyable living. However, the contribution each convenience makes for more enjoyable living depends, for the most part, on the individual. The housewife has her favorites, the husband his and the children theirs. But, on the top of the list of items in the home, essential to the entire family's comfort, is the heating system which creates and maintains the indoor climate in which you spend the greater part of your time.

Let's call it your ideal indoor climate and let the temperature at which you enjoy your home be entirely up to you. In the past, for example, we have all heard a lot about healthful temperatures (lower than maintained in most homes), the benefits of a cold shower, or the invigorating results of morning exercise. Yet, a great many people think a cold shower pure nonsense and morning exercise an exclusive pastime for athletes. Likewise, some people like the temperature of their home 68° F., while others prefer the temperature to be 75° or 76° F.

We are not suggesting or establishing what temperature your indoor climate should be, but pointing out the best way to get the indoor climate you like best, regardless of the temperature you and your family prefer.

To Obtain Ideal Indoor Climate. Let's review the five conditions of indoor climate which affect your health and comfort.

First, there is the *temperature of the air*. The heating system does not add heat to the individual, but reduces the rate at which the body loses heat by

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radiation, convection and evaporation. Healthful comfort requires that heat shall escape from the body at the same rate that bodily heat is generated by the oxidation of food. Therefore, each person has a preferred comfort temperature, depending upon his physical condition, the clothing he wears, and the rate of oxidation of the food he eats. The important thing is to select a heating system which



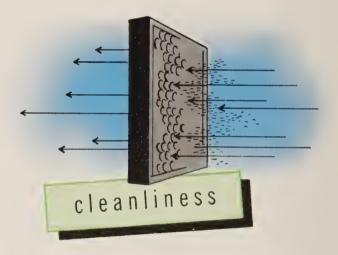
can maintain the selected temperature uniformly.

Next, is the *moisture content of the air*. Certainly it is desirable to add some moisture to the air in addition to that which is gained from cooking, laundry and the bath, but don't make a fetish of it to the extent that cold surfaces such as windows, doors

and outside walls sweat and ruin the woodwork and decorations. A relative humidity in the neighborhood of 25% is considered ample for the comfort and well-being of most people.

In a house insulated with a bat or fill type insulation, adequate ventilation of the attic space should be provided. An effective vapor barrier should be incorporated in the walls to prevent saturation of the insulation from the humidity within the house. Discuss this with your architect or builder.

Next, one of the conditions frequently cited for good indoor climate is a *constant*, *gentle circulation* of air throughout the home to keep it fresh and avoid stagnation. Some types of heating systems



provide more circulation than others so that your own personal taste can be satisfied by your choice of heating system.

Fourth, is the *cleanliness of the air* within the home. Modern tight construction prevents much of the dust infiltration into the house, but some is bound to track in especially if there are children or pets. Suspended dust particles in the air are irritating to the nasal passages and carry germs. Filtering of the air as it passes through the heat distribution system removes a large portion of the dust and lint, producing a more healthful atmosphere and eliminating much cleaning and dusting.

And finally, is the *quality of the air*. An insufficient oxygen content is neither healthful nor comfortable and produces fatigue. Modern "sealed" home construction, insulated against weather, may



not permit enough fresh air infiltration unless means are provided to make it available through your heating system. The contrary is true of many old uninsulated houses with loose windows and ill-fitting doors where excessive leakage is evidenced by uncomfortable drafts which produce chilly feelings.



Each of these conditions has its effect on bodily comfort and through the years the inventive genius of the heating industry has been directed to the development of home heating systems and equipment which automatically control all five factors essential to ideal indoor climate. Therefore, you now can obtain the indoor climate you desire and maintain it indefinitely, once you have carefully considered and decided the following factors:



1 Decide upon the fuel that you will use.



2 Decide upon the type heating system to be employed.



3 Decide upon the heating contractor who will install the heating system.



Cas and oil are usually considered as the fuels which lend themselves best to automatic heating, although the recently developed bin-feed stoker has eliminated the actual handling and shoveling of solid fuel. Each fuel permits automatic firing and regulation of the temperature in the living quarters as accurately as its inherent flexibility and character make possible.

Most people agree that gas, because of its very nature, is the most desirable. It is piped into your house ready to burn. It requires no storage, no handling or mechanical treatment to make it burn. As it burns it leaves no residue of any kind, hence creates no additional cleaning problem either in the basement or in the living quarters.

You do not have to remember to order gas nor

be there when it is delivered. As frequently as required by the temperature of the room, the thermostat on the wall orders it direct from the local gas plant or from the natural gas wells hundreds of miles away in just the right quantity to keep your house comfortable, regardless of weather conditions.

Gas Heat Is Fully Automatic. Gas was once thought, in some sections of the country, to be a luxury fuel, highly desirable, but beyond the means of many. On the contrary, all things considered, gas heat is economical in its original cost of equipment, in equipment maintenance cost, and overall operating cost. In the years prior to the war, hundreds of thousands of modest homes in all parts of the country, in manufactured and natural gas areas, installed fully automatic gas heat and today more than two million homes are gas heated.



Various recent surveys of prospective home builders show that more of them prefer gas for heating than for any other single fuel, due to its many outstanding advantages.

If gas for heating is not available in your locality, then by all means consider bottled or liquefied gas or other automatic types. You will certainly want the benefits of some kind of automatic heat.

types of heating systems

There are two general types of heating systems, each of which is discussed in the following pages. When you understand the general principles of each type of system, what it does and how it does it, and what its advantages and limitations are, then you can select the one which will produce the kind

of made-to-order indoor climate you want in your new or remodeled home.

Types of systems are usually classified as warm air and radiator systems. Warm air systems are available in two types-gravity circulation systems and forced air winter air conditioning systems.

warm air systems

Winter Air Conditioning—(Forced Circulation). In many communities forced warm air heating, better known as winter air conditioning, is being installed in the majority of new homes. This system retains all the inherent advantages of gravity warm air heating and adds the benefits of clean, moistened, dust and lint free forced air circulation. These additional advantages are obtained through the inclusion within the heating unit of a blower which forces the warmed air to all parts of the home, regardless of pipe and wind resistance; air filters which clean the air before it can enter the distribu-



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tion system, and automatic humidifier which better regulates the supply of moisture.

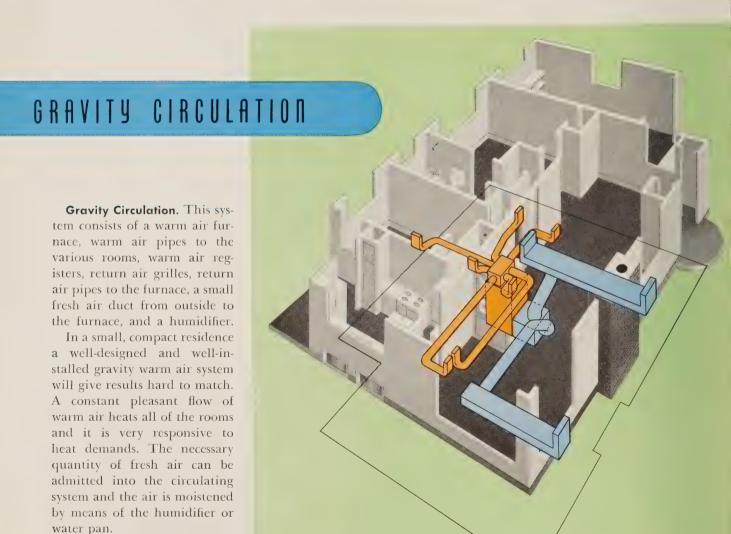
The heating unit itself is smaller and more compact than a gravity unit. The warm air and return air ducts are smaller and can be installed flat against the ceiling or within the joist spaces out of sight, making the basement space suitable for recreation use. The warm air and return air grilles are smaller and more latitude is possible in their location for the convenience of furniture arrangement.

Because of the positive forced circulation of air this system is excellently adapted to larger and rambling types of houses which require longer warm air ducts and cold air returns.

The extreme compactness of the forced air heat-

ing unit as well as the forced air circulation also makes it ideal for utility room installation in a basementless type house, or when gas is used as fuel it can be placed in the kitchen or living quarters closet.

A very desirable feature of this system is provided by the air filters through which all the air in the house is re-circulated many times a day to remove suspended dust and lint. This, together with the air moistener, fresh air intake and combined with the gently circulated warm air, provides the home with a fresh, clean, comfortable, invigorating indoor climate. In the summer the blower can be used to provide air circulation for improved room comfort.

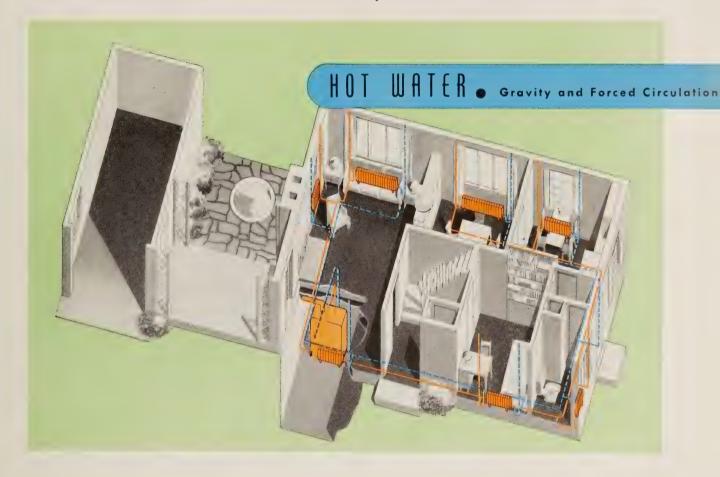


It operates upon the natural law that warm air rises and is replaced by cooler air. Of neces-



sity, the gravity type furnace must be installed below the level of the rooms to be heated, and should be in a central location and length of ducts is limited. Gravity warm air heating systems have the advantages of simplicity, a minimum of mechanical devices, low initial cost and low overall operating cost.

radiator systems



Hot Water—Gravity and Forced Circulation. Hot water heating is considered by many to be the finest of the radiator systems for residential use, and the lowest in operating cost. Its many users testify to the quality and uniformity of the heating comfort it maintains throughout the house. It is quiet and simple in operation.

Some people object to the space occupied by radiators and to their interference with furniture arrangements. However, this objection has been considerably overcome by the present practice of partially or entirely recessing the radiators or using convectors in the walls.

There are two types, the gravity and forced cir-

culation. In general the gravity system consists of a hot water boiler; a piping system to carry the heated water to the radiators or convectors located in each room; the radiators which transfer the heat from the water to the room by means of convection and radiation; and the return pipes which carry the cooled water back to the boiler. It has a wide application in residences of most any type except those of the large rambling variety which require excessively long supply and return systems, requiring forced hot water circulation.

The forced flow hot water system retains the basic values of the gravity system and in addition possesses a number of advantages which are made



possible by the water circulating pump which is incorporated in the system.

First, the forced circulation results in a faster response to heat requirements and more accurate temperature control. The water in the boiler is kept at a constant temperature. As soon as the room thermostat calls for heat the pump starts and immediately circulates hot water throughout the system until the room thermostat is satisfied.

This system takes fullest advantage of the new smaller radiators and convectors and makes possible the use of small tubing instead of large pipe for the circulating system. It is far superior to the gravity system for use in basementless houses where the boiler is to be located in the utility room.

Also, it is an excellent system for large rambling type houses because the forced circulation assures adequate heating of the most distant rooms, and it is particularly suited to use with zone control. Some sections of large houses cool more rapidly than other portions due to wind direction, exposure, etc. Better temperature regulation can be secured if the heating system is separated into two or more zones with each zone under the control of a thermostat located within that area. This results in more uniform heating and greater economy.

other types of radiator heating systems

In principle all radiator systems warm the home by the same means. All of them require a boiler, radiators, and a supply and return system between the boiler and radiators.

In addition to the hot water systems there are one pipe steam, two pipe steam, vapor systems, etc. *The steam system* uses steam to carry the heat from the boiler to radiators. The piping and radiators are smaller than those used in a hot water system.

The vapor system is a modification of the steam system. It is an air tight two pipe system—one pipe carrying the vapor to the radiators, the other pipe returning the condensation to the boiler. The radiators are equipped with vacuum type vent-valves so that once the air is vented from the sys-

tem and the vapor starts to condense a vacuum is created within the system.

The split system is really a combination system wherein some rooms of the house, such as kitchen, baths, servants' quarters and remote rooms, are heated with hot water or steam radiators, the balance of the house being heated by means of a circulated warm air system.

This system of heating is eminently satisfactory. Because of its higher first cost it is usually found in the larger and more expensive homes.

There is a reason for each system and a place for it. If you have decided that you want a radiator system, then look to your heating contractor or gas company for advice on the type most suitable for your home.

radiant heating

Although as yet radiant heating is not one of the generally used and accepted methods of heating, it is being widely discussed for greater application and should not be overlooked. Surprisingly, it is not a new principle since evidence is found in ancient ruins of Roman baths that flues from fireplaces carried the hot gases under the floors of the rooms, thus warming the interior through the floor.

In recent years quite a number of experimental installations have been made in various types of buildings, both residential and commercial, using warm air in some cases and hot water in others, as the heating medium. Warm air or hot water pipes are laid in the floors or walls of the building through which the air or water is circulated by means of a pump or blower.

Shown opposite is a new type of home which takes advantage of solar radiation (heat from the sun's rays) to furnish part of its heating requirements and incorporates a radiant heating system in the floor to supply the heat required additionally and at

night and on cloudy days.

RADIANT

For this method of heating, tile ducts underlay the floor. Warm air from a Janitrol forced air unit is circulated rapidly through the ducts and gives up its heat to the floor. The floor warms the room and its occupants.

Another method of accomplishing the same result is

through the use of wrought iron pipes laid in the floor, through which hot water is circulated from a hot water boiler (bottom illustration). This requires a forced flow hot water system for positive circulation.

There are many variations in the types of heating systems described herein. Therefore you should decide upon the kind of indoor climate you want and depend upon your architect and heating contractor



to help you pick the right system and manufacturers' equipment.

In certain sections of the country one type of system may be used almost to the exclusion of all others. This is primarily because of habit and custom on the part of both the public and the building industry. Consider all types and pick the one that will give you what you want regardless of local custom.





Year-Round Air Conditioning

F FIRST importance in the consideration of year-round air conditioning for the home, is a clear understanding of its functions. Many types of equipment used for air conditioning do not do a complete job. Therefore, great care must be taken in selecting equipment, in order to avoid paying a high price for unsatisfactory results.

Year-round air conditioning is a dual function. It is heating and cooling, both of which fall under the general heading of temperature control. But true air conditioning is also humidity control, which is equally important, but all too often

AND FROM
ROOMS

BLOWER—TO CIRCULATE

FILTERS—TO CLEAN IT

SPRAY OR WET SURFACE
HUMIDIPIER
TO ADD MOISTURE

WITH CAS OR OIL BURNER
OR COAL STOKER

WITH CAS OR OIL BURNER
OR COAL STOKER

SUMMER

TO ADD MOISTURE

COOLER
TO DRY IT

SUMMER

LINES—TO CLEAN IT

WINTER

BLOWER—TO CIRCULATE
THE AIR

SUMMER

FILTERS—TO CLEAN IT

WINTER

HUMIDIFIER

MAY BE ONE UNIT

MAY BE ONE UNIT

AII YOUR AIR CONDITIONING

MAY BE ONE UNIT

Courtesy "What's New in Home Economics"

Diagrams above show principal elements in three popular types of home air conditioning.

neglected, resulting in disappointment in its operation. Lack of humidity control in the year-round air conditioning system will produce either an extremely arid, or an uncomfortably "stuffy" atmosphere during the heating season, and body chill, shock and claminess in summer, both of which are definitely proved unhealthy atmospheres in which to live.

Manufacturers soon will offer complete air conditioning units, featuring both temperature and humidity control, in a compact "packaged" form, including all the controls, ducts and valves for its installation. These units will be equipped with filters to remove dirt particles and pollens from the air, and noise cushioned blowers to circulate the air at the same time eliminate drafts.

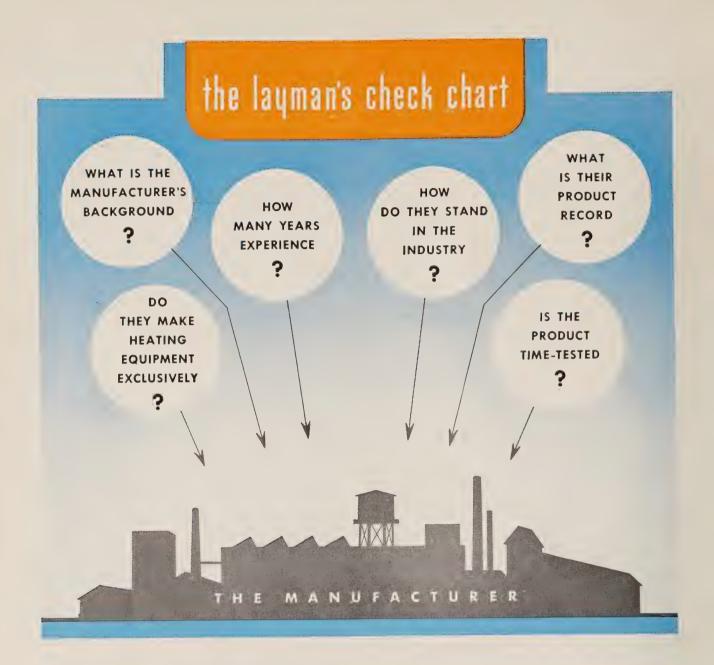
In selecting your year-round air conditioning system look for:

- 1-Controlled heating and cooling
- 2—Controlled humidity (year round)
- 3-Efficient air filtering
- 4-Noise-free, draft-free air circulation.

Such a system, however, will be impractical in many homes, as the efficiency and cost of operation will depend upon the home construction. New homes should be planned and constructed to provide for complete year-round air conditioning systems, whether installed immediately, or at a later date. For best results, the walls should be completely insulated and the home fitted with double stationary windows.

Discuss your problem of air conditioning with your architect and a competent air conditioning engineer from your gas company.





To the uninitiated buyer of heating, various makes look very much alike. Illustrations or photographs are similar and the design and construction description may appear so mechanical or technical to the layman that he fails to interpret in terms of satisfactory performance outstanding and individual design features. This is only natural, for all equipment is designed to supply heat and all makes have certain similar family characteristics, the same as all cars, radios, ranges, refrigerators and countless other mechanical devices. Therefore, in buying heating equipment you should be guided by your architect or builder, gas company and heating contractor, asking them to interpret design and construction features in terms of what they mean to

you in economy, efficiency and satisfactory heating service.

You may also be guided by the same sound judgment you use in buying other items. You are undoubtedly guided by the reputation of the manufacturer, the "know-how" he has acquired in designing and producing equipment within his field of experience and his reputation for giving outstanding value in the particular unit you are buying.

Use the same good judgment in selecting your heating contractor and you will be assured of satisfactory heating.



Choosing a good Heating Contractor

depends upon the right equipment and a good system properly designed and expertly installed by a reliable heating contractor who is interested in doing a good job at a fair profit.

Whether you or your architect or builder selects him, due consideration should be given to his reputation for making satisfactory installations in the first place, and then for taking a continued interest in continued satisfactory performance. It is well to remember that unless he gets a fair price for his work he will not and cannot afford to spend a lot of time with you.

Before construction is started the final heating plans and specifications should be submitted to make sure that none of the pipes, ducts, registers or radiators will conflict with other structural features of the house or interfere with the furniture arrangements planned. The specifications should show the name and capacity of the unit to be used, the type and size of ducts or pipes, the type and finish of registers, grilles or radiators and the kind of controls. The plans, of course, should show the location of the heating unit, all ducts, pipes, registers or radiators.

Information concerning the responsibility of the heating contractor is of utmost importance. The National Warm Air Heating and Air Conditioning Association offers some sage advice. Inquire if the dealer complies with the standards as set forth in the Installation Code of the National Warm Air Heating and Air Conditioning Association. Make

sure that all bidders are bidding on the same specifications, especially if there are big differences in the bid prices. In case of differences among the bidders as to recommended layout, size and quality of equipment, give careful consideration to each before making a decision.

The layout should be corrected, if necessary, then accepted and the contract let before erection of the framework of the house is started. Also, the heating contractor should be on the job site before the plumbing and electrical contractors begin their work so they can all coordinate their work as the construction progresses.

Once the house is completed and heat is required, the heating system will require balancing and final adjustments must be made. It is well to include in the contract with the heating contractor a statement that this service will be provided, as well as obtaining an understanding as to how and on what basis service will be furnished.



Examples of Todays Modern Peacetime Home

Marly in this book it was explained that "the modern scientific way to plan a house is to start with the interior and then design a suitable exterior to cover the building thus arranged." Throughout the book the fundamentals of proper planning, construction and equipment were expounded. Now, with ideas organized and rough sketches made you are ready to call in your architect or building contractor for professional advice and guidance in the development of final plans and drawings that will transform your hopes and desires into your Peacetime Home.

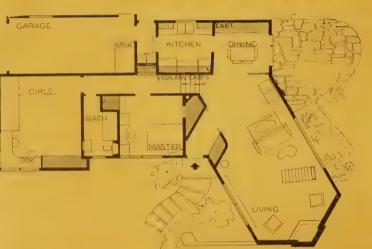
It is necessary at this point to have some fairly concrete ideas of the type of home you want. To aid you in making this important decision we called upon outstanding architects to give their interpretation of post-war designs representative of building trends in their respective sections of the country. They were commissioned to develop modern practical homes economical to build and to utilize materials and equipment that are modern and reliable and will be readily available for building at an early date.

These designs are presented in this section as Outstanding Examples of Today's Modern Peacetime Homes. They range in type from the ultra-modern solar-type to the conventional, modernized Colonial. In them you will find many excellent and modern ideas that may help you make your own important decisions on the type of home that will best express your own ideas of *better* living in a better peacetime world.



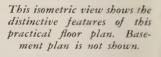
Sprawling, with low-pitched roof, this modern home radiates charm and individuality for folks who enjoy living.





The low garden wall with its flat vase extends out like a welcoming arm and seems to tie the house to the grounds. The front door opens directly into a large, high-ceilinged living room of "free shape." A large window gives a picture view of the garden sweeping downward from the house. The end of the room becomes a cozy dining alcove with a lowered ceiling. It is separated from the living room by a draw curtain. The kitchen is equipped with a gas range and gas refrigerator.

Aside from the many builtin cabinets and closets, the tri-level scheme is ideally logical where the frost line demands that the foundation must extend 4'0" below the grade. The basement contains the laundry, only a few steps below and adjacent to the



THE "TRI-LEVEL" SUBURBAN HOME

A low-lying, sprawling home with low-pitched, wide overhanging roof

By Harry Harman, Architect and Owner











THE "SAGEBRUSH" By Robert C. Deigert, A.I.A.

A distinctive 6 room, modified ranch type house of frame and glass

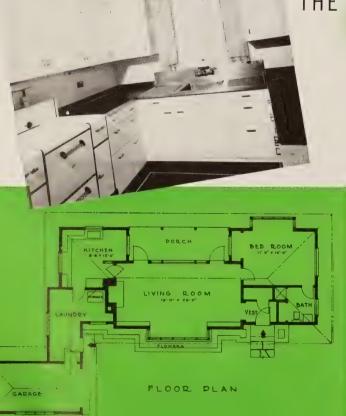
FOLKS who prefer the rustic atmosphere of the ranch house will be delightfully surprised with this unique example . . . slightly modified to include advanced features not ordinarily found in a house of this type.

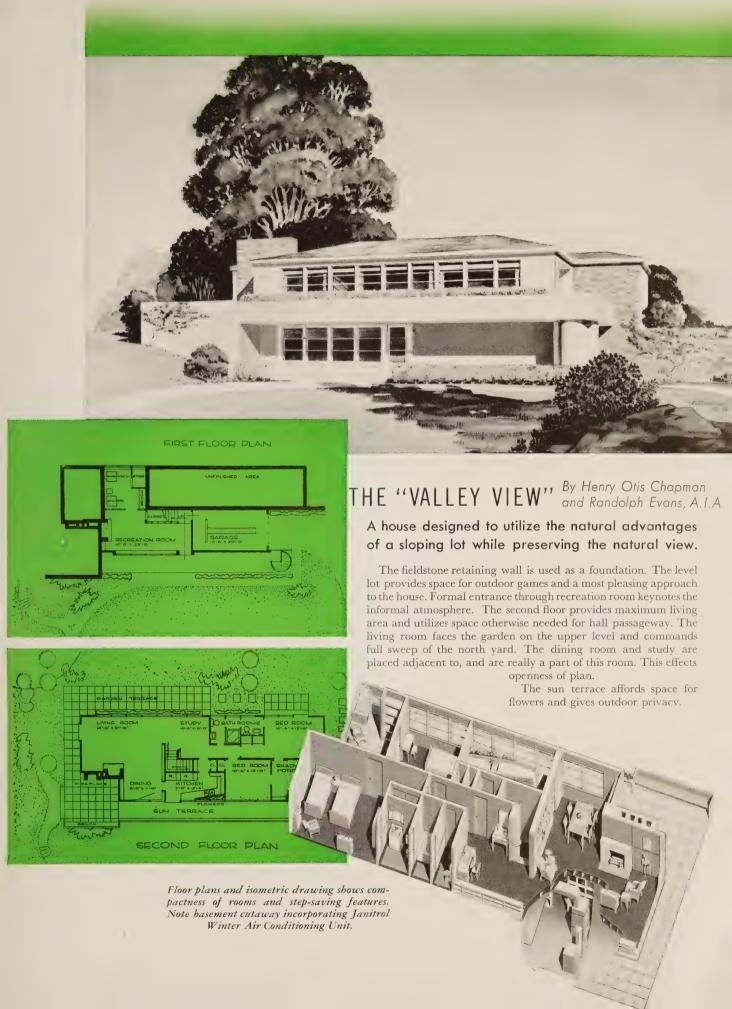
The low-pitched roof with four-foot sun visor eaves provides coolness and protection from strong light. A large 7'x4' picture window occupies the east wall of the living room overlooking an outside terrace and garden. A large 8'x14' bay forms an integral part of the west wall and is enclosed by stoned-up flower beds directly in front of the bay.

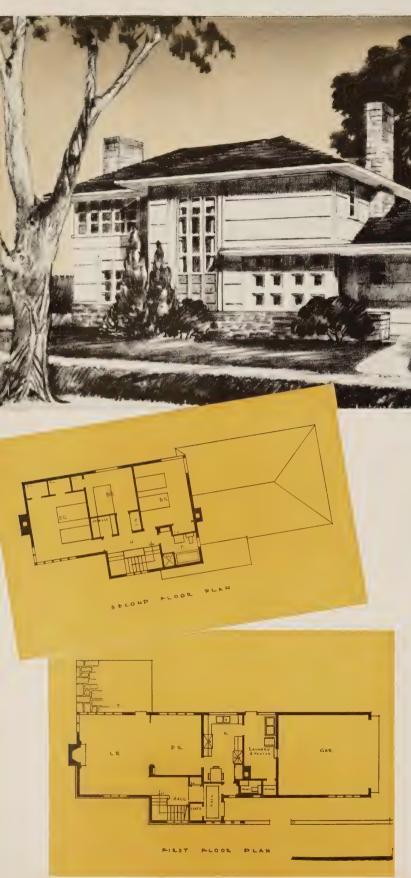
Glass blocks are used on two exterior walls and in back of the bedroom wardrobe. The modern kitchen provides glass block paneling on the north wall together with counter level work table of the same material.

The attractive stone fireplace centers on a wall of burgundy vitrolite. Bathroom walls are cadet blue and white vitrolite forming a pleasing harmony.

A hot water system with gas-fired boiler provides unusually economical house heating.







Practicability is predominate in these floor plans. Note the conveniently located utility room in relation to kitchen.

THE "TRANSITIONAL"

A progressive type, all-gas, six room basementless frame with attached garage

By Maxwell Arden Norcross, A.I.A.

The living and dining areas are thrown together to obtain as much spaciousness as possible and this is further enhanced by the large glass areas, at the rear garden side of the house. The two-car garage is connected to the house with access through the utility room. The lavatory is accessible without cutting through any rooms. In the bedrooms, large windows give ventilation from two directions. Large closets and storage space have not been overlooked and a roomy bathroom with shower, tub and convenient linen closet completes a very livable plan. Noteworthy is the concentration of all plumbing, eliminating any long runs of piping. The simplicity and compactness of the heating layout is illustrated in the accompanying floor plans.

The tendency of small houses to become too box-like and vertical has been eliminated by the generous overhanging eaves and the accenting of the horizontal lines throughout. The basement has been entirely eliminated and a utility room provided off the kitchen taking care of the laundry and heating equipment.

The saving of unnecessary steps in this house should appeal strongly to the housewife who performs all the housework alone.



THE "HINGHAM HOUSE"

By Royal Barry Wills, A.I.A.

THE lines of the house are simple and direct and clearly express the plan within. The porch is placed to extend the horizontal lines while serving its own function and sheltering a small courtyard garden in the rear. Although the house is traditional, the plan is somewhat open and large windows are used extensively on the southern side.

The rooms are all of good size, with adequate closet space. The circulation is excellent, with the lavatory strategically placed. The hall is of minimum size, but has an ample coat closet. The living room and dining room are combined for spaciousness, but a bank of cabinets facilitates the placement of furniture.

The study may serve a variety of uses and may be a playroom or bedroom when occasion arises. If the basement is omitted, this room serves as a utility room.

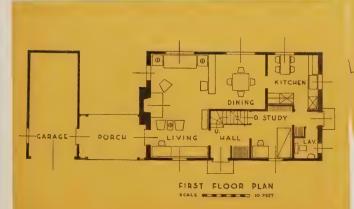
All rooms on the first and second floors, with the exception of the study, have southern exposure.

The second floor shows an abundance of storage space. The two larger rooms have two closets each and the smaller room a good-sized closet. The sewing alcove with its cabinets is a feature on the second floor. There is a large closet in the hall, as well as one in the bath.

The Flush Board Walls of the Front of This Colonial House Contrast Pleasantly With the Brick Ends and Form a Perfect Foil for Leafy Shadows



this second floor plan. Also the generous closet space provided throughout the rooms.





THE "SOLAR HOUSE"

An example of advanced architecture that is gaining popularity in many localities because of its unique yet practical features

By George Fred Keck, A.I.A.

DED ROOM 1 BED ROOM 2 BED ROOM 3 RITCHEN

ALL the important rooms are laid out to take advantage of the sun. In the summer no sun enters the house. In the winter the sun shines full into the house, and acts as an auxiliary heating system.

A system of radiant heat with forced hot air as a medium is introduced. The floor and foundation is of masonry which is warmed in the winter and which acts as a cooling agent in the summer.

Outstanding in advanced features is the flat roof which carries a thin sheet of water for summer cooling.

All glazing and glass is fixed into position and ventilating

units are introduced above and below this glazing for ventilation. Copper screening is placed behind the louvres in the ventilators, making it unnecessary to put up screens in the spring and storm windows in the fall.

One fixed permanent bedroom and two folding partitions make this small plan equivalent of a three bedroom efficiency house.

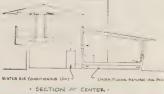
On the bedroom end, the rooms can be extended to include as many more bedrooms and baths as may be necessary and on the kitchen utility room end, additional storage room and garage may be built.

Elevation views of front and rear. Note flat roof which is covered with sheet of water for summer cooling.





This elevation view shows the unique design of the first floor in relation to the second floor, avoiding excessive height.



THE "AMERICANA" By Harris Armstrong, A.I.A.

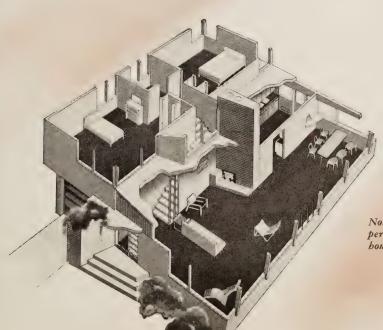
An attractive semi-solar type, all-gas, frame and stucco with five rooms and attached garage

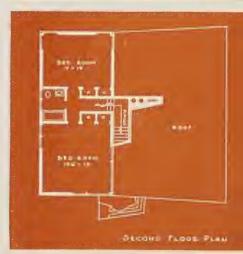
LONG LOW-PITCHED roof lines in large plane surfaces tie the mass of the house into the earth, and the very extensive use of glass in the walls makes them disappear as structural divisions of space.

The proposed construction for this house is conventional wood framing covered with stucco exterior surfacing. Exposed masonry is to be brick, and large windows may be double plate glass if the house is to be built in a cold climate. Proper insulation is to be provided and roof material is slate coated asphalt built-up roof.

This house is particularly adapted to forced warm air heating and makes use of the underfloor space below living room, dining room and kitchen as a cold air return plenum, and in this way eliminates the expense of the five air return ducts in this part of the house. Exposed earth in this area is covered with a 6" layer of clean cinders for insulation.

The parts of this house are so related to each other that housework is kept to a minimum and compactness of floor plan assures economy of heating.





PRINT FLOOR PLAN

Note the compactness and simplicity shown in the perspective drawing. Step-saving features hold bousework at a minimum in this unique yet practical design.



THE "WENATCHEE"

by Robert G. Cerney, A.I.A. Long & Thorshov, Inc.

O_TOOM LIVING

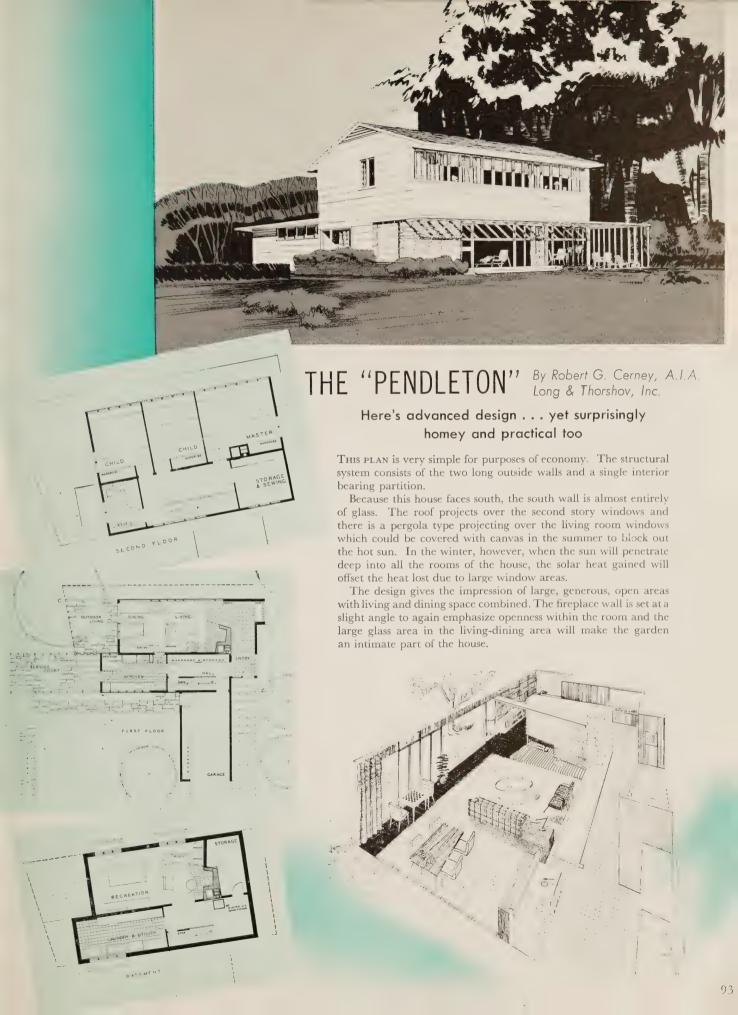
An unusual Northwest type rambling house for the rugged individualist

This L-shaped house creates a protected garden area to the southeast and an outdoor living space which is enhanced by a stone fireplace wall. Roof is low with wide projecting eaves used in the solar principal.

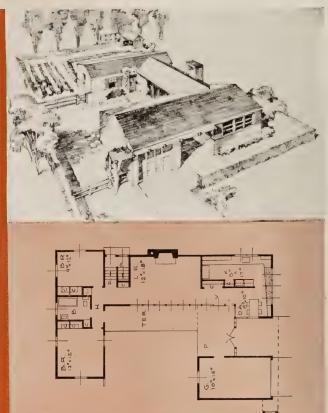
The large open entranceway provides inviting shelter and the outdoor living area is an extension of the interior living space for lounging and entertaining.

This plan, although unique, is very simple and space has been designed for specific types of activities rather than confining rooms which have limited functions. These spaces include areas for working, relaxing and sleeping. The dining space, with a pleasant garden view, is small as it should be, since this area is the least used of all

The work room is literally a laboratory for the woman of the house and contains facilities for cooking, laundry, sewing, meal planning and storage. Also in this room is the Janitrol gas-fired winter air conditioner which supplies forced warm air throughout the house.







THREE CHARMING EXAMPLES

Of Modern Design and Arrangement for the Small Home

By HENRY OTIS CHAPMAN and RANDOLPH EVANS

Above left—A gracious entrance porch adds a touch of charm to this distinctively modern home. The large vestibule permits direct access to the bedroom portion of the house, ensuring privacy to the living room. The delightful kitchen has room for a table by the window. The unique window arrangement in the bedrooms frees a large amount of wall space. Closets are ample.

A generous overhang shelters the sliding glass doors which create a spatial link between indoor and outdoor areas.

Above right—A conservatively modern ranch house well suited to any part of the country that possesses some extraordinarily pleasant features.

The kitchen has been placed toward the street to insure a maximum of privacy to the remaining portion of the house. Passing through a shaded court, you catch a glimpse of the garden before entering the house. The isolated bedroom wing may be entered directly from either the side of the house or the garden.

A shaded porch and a gracious living room enhance the relationship of house and garden.

Below—This modern adaptation of the ranch house style, achieves a high degree of privacy by placing the living room toward the rear and the entrance beyond a delightful court.

A bedroom wing, well isolated assures quiet and privacy. The kitchen is unusually light and spacious and the dinette windows give variety to the view from the living room. Projecting wings shield the large glass area of the living room with new double glazing, and heat loss is negligible.



F you are planning to make over a house for your peacetime home, you will have plenty of company. It has been freely, and officially, predicted that modernization will gain a new popularity now that production restrictions are lifted. One reason is the urgent need, in some localities, for additional housing, a need which will not quickly be satisfied by new building. There is also the backlog of modernization and repair work built up during the war. Also, materials are expected to be more easily available for modernizing than for new building, largely because the lumber needed for new building is the most critical item of materials. Moreover, building costs will probably be higher in the early postwar months than they were in the early '40's, a factor which makes modernization practical and worthy of consideration.

Modernization is most successful when the house is most suitable for it. If that sounds a bit obvious, it is nevertheless a basic fact. And a fact of particular importance to those who have yet to acquire the house they are to modernize. Modernizing a house selected for that purpose is much different, and much more satisfactory than re-doing just any old house. However, even in the latter case, the process can work wonders scarcely believable beforehand.

Assuming for the moment that you can still pick and choose, here are a few general pointers:

Before buying the house, you will, of course, check the desirability of the neighborhood. Check it also from the standpoint of economics. It is poor business to do a major modernization job in a neighborhood that is showing signs of "blight," that is



Compare the above floor plans with the remodeled plans below. This is a good example of skillful planning inside combined with simple face lifting on the outside.

beginning to run down. The value of your house is finally determined by its neighbors; and it is a mistake to put yours in shape to last forty more years if the surroundings are going to be undesirable in another ten years.

Select a house whose basic lines are not too far from what you want. Sometimes, or rather in some places, it is surprisingly easy to find a house that seems crying for modernization. In Ohio, for example, there are thousands of old houses originally patterned after New England farm houses; they would be easy to make beautiful, or easy to add to. Farther west, on the other hand, there was once a great rash of awkward, high, old, carpenter-designed houses; they are still there and they seem to defy anybody to make them presentable.

The Photograph Test. Spotting the good ones, or checking on the possibilities of a given house, is not always easy. An old trick is to take a clear photograph of the house in question and make several big enlargements. Then, simply paint out notice-

able bad features, also paint in suggested improvements. New landscaping can thus be visualized, or new shutters, or a new side porch, attached garage, or a whole new wing. After retouching a photograph the final effect may still require a bit of imagination, but not nearly so much as if it were entirely a mental process.

Architectural problems, however, are by no means the most important ones in selecting a house to modernize. More important are two major considerations: 1) Can the floor plan of the house be made suitable to the particular needs of the family? 2) Is it structurally and mechanically sound? Usually the second question will not produce a wholly satisfactory answer; it then becomes a question of how serious and how expensive are the improvements that will be required.

The Floor Plan Comes First. As always in contemporary thought about houses, the floor plan comes first of all. Practically all of the plan considerations given in the section on planning a new house can be applied in some fashion to the study of a house for modernization. For the final objective is exactly the same: a house that will fit the family's specific needs. Usually in modernization the plan study is somewhat more difficult, involving as it does the inherent limitations of the original plan; and usually more compromises will eventually be made.

It is these plan limitations that deserve first attention in the inspection of the house. Old houses have a predilection for small living rooms, too few bathrooms, lack of closet and storage space, and poor kitchen arrangements. So major plan changes are the usual thing.

Check Your Partitions. In working over an old plan, check first the partitions of the house, to see which can be removed and which are "bearing" walls. Probably you can check roughly for yourself; in any case, an architect or building contractor can soon tell you which are main bearing walls, not to be simply removed, and which are merely partitions, supporting no major load above. A quick method is to determine which inside walls are supporting walls in the story above.

Of course, it is possible to remove bearing walls, but it does get more expensive. It involves a steel beam to support the load above. Or sometimes it is possible to remove a part of a bearing wall, leaving a wide doorway or arched opening, carrying the structure above on a beam resting on heavy posts at either side. Such devices are not so expensive that they need be dismissed; many an old house that most prospective buyers passed up because it seemed difficult to alter, has been picked up cheaply by some contractor who knew how to handle major structural changes.

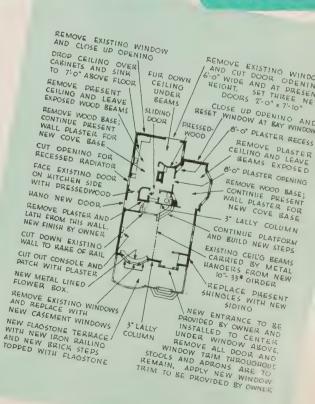
While still in the investigation stage, the house should, of course, be checked thoroughly for structural faults.

Is It Structurally Sound? Perhaps first of all is the matter of settling foundations. A very high proportion of houses, even well-built ones, settle somewhat. The expectation is that after a few years the foundations will find their permanent positions and the settling will stop, but it is not safe to assume, because a house is old, that it has stopped. Usually settling will be obvious in plaster cracks. Old settlement cracks may still be visible, never having been

Don't give up the job as hopeless at first sight. Compare the exteriors and the many interior improvements as specified by the architect.









properly repaired. Watch particularly, however, for new cracks. Big new cracks—new since the last decorating—mean settlement or structural weakness not yet stopped or corrected. So-called hairline plaster cracks may be due merely to the swelling and shrinking of timbers in alternate damp and dry weather. Especially serious settling, old or new, will also show up in sloping floors and sticking doors or sagging door frames.

Look in the basement for cracked foundation walls, and while you are there you will, of course, look for signs of excessive moisture in the basement. If either condition is found it is best to seek the advice of a good local contractor or architect, to see if it can be corrected without excessive cost. Particularly don't take lightly the matter of a wet basement, for there are stubborn cases that are difficult, if not impossible, to correct.

Check in the basement and attic for signs of generally flimsy construction. Light joists with a tendency to curve can be taken as a sign that framing is light throughout the house. Another factor in sound construction is good nailing, and this can usually be checked in the basement. Look at the little cross braces between the joists, the "bridg-

ing"; if it is well nailed it is a logical assumption that the rest of the house is also.

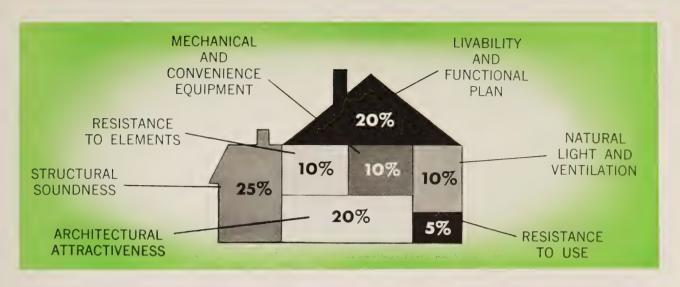
Is It Dry? Another thing to check in the basement is the sills, the timbers along the top of foundation walls. Here any work of termites should show up, though it will require a little prying with an ice pick or strong knife. "Dry rot" will be shown up the same way, the wood crumbling out. Check the sills also for signs of moisture. Excessive moisture in side walls is likely to show up at this point, and excessive moisture is serious; wood construction will last a long time if it is well nailed and dry, but it will soon rot if too damp. Look also for signs of dampness around window sills and window frames. Moisture here usually means leakage of rain and snow, and can usually be corrected by caulking.

There are, of course, literally hundreds of other items of construction and equipment that eventually must have close inspection. Even a simple check list of them becomes almost interminable. In general a buyer will expect to correct a hundred faults and inadequacies, and there are not many that cannot be overcome. Generalization is impossible on costs and difficulties of installing various items, for individual circumstances are rarely comparable even for minor things.

Plan for Future Improvements. One thing to remember is that when major changes are being made it is a good idea to look for other items that may eventually come up. When replastering a wall, for example, think of wiring changes, or insulation, or heating pipes, or plumbing; while the wall is open

This unattractive, outmoded home needs a general "face lifting" both inside and out for eye appeal and modernity.





The above Rating Table used by the Federal Housing Administration is used in determining values for mortgage loans.

is a good time to make alterations which would be much more expensive at another time.

Wiring is perhaps worth especial mention. Virtually every old house has inadequate wiring, and even what appears adequate now will likely fall short of future requirements. Today electrical manufacturers are planning an enticing array of modern appliances, all of which will call for wiring capacity.

Such things are worth considering when there is a question between a major job at one time, and a progressive modernization through the years. If the latter is necessary it is still advisable to plan ahead, so that mechanical connections can be handled at the most convenient time.

Mechanical things, notably heating and plumbing, may also be a large consideration in the plan study; indeed, they frequently are controlling factors. For example, it might be a simple matter to put a bathroom in a certain location, where soil stack and water lines are already near by, whereas another more desirable location would involve expensive wall openings and redecoration to get the piping in.

Still on the assumption that the house to be modernized has not yet been bought, it might be inter-



Setá plan a PEACETIME HOME

esting to see how the Federal Housing Administration rates various considerations about a house in determining its value for mortgage loans. Note the rating chart on the preceding page which shows how the important factors are weighed.

Turning now to the problems of modernizing a given house, there are a few suggestions that can be made on general points. It must be understood that every house offers its own specific problems; it is more difficult to generalize on modernization than on new building. Nevertheless, there are basic principles.

Architectural Suggestions. Back in the severe depression days, realtors with rental problems did surprisingly effective things with paint, and little else. So, if the final improvement must wait, the painting lesson will be worth remembering as a temporary substitute for bigger things.

It is basically a matter of camouflage. Suppose that a close study of the house indicates that architectural improvement lies in emphasizing certain lines or features of the facade and in removing or at least softening other lines or features. Work the camouflage technique to disguise the eyesores (if they cannot simply be removed) and work the same technique in reverse to bring up the lines that would help the effect.

If the roof line is awkward, for example, try

If the roof line is awkward, for example, try painting its stronger lines in with the house itself—white is usually best. In other words, make it as inconspicuous as possible. And try emphasizing something lower down—if the windows are well proportioned, paint the shutters a strong green, or maybe black. Or perhaps the front entrance could be brought out strongly. Most people shudder at the thought of a Chinese red front door, but it is easy to imagine how it would distract one from a bad roof line.

In short, paint offers the house owner all the tricks of the Hollywood makeup artist's box. And just as facial camouflage requires taste and skill, so does the camouflage of a house.

Tricks of Landscaping. Don't forget the possibilities of landscaping in the same direction. They are virtually endless. Proper base planting can visually lower a house that stands too high, can hide an ugly foundation course. It can also broaden the lines of a house, help it blend into the landscape, and give it a grace not inherent in the house itself. A front terrace, a side garden, a fence or stone wall, even a grape arbor or rose trellis—all are definite architectural elements which join in the ensemble.

Tricks of this general kind are particularly useful for the thousands and thousands of houses built from "stock plans." Perhaps the original plans were good, but the end result was scarcely recognizable, because the stock plans were turned over to a contractor who had his own ideas, or they were altered for building code requirements, or boosted up to provide cellar windows, or the dimensions were changed just enough to spoil the composition, or the



Courtery Better Homes and Gardens

Above—This home obviously appeared to be a problem. Its "dated" architecture and neglected condition looked quite discouraging.

Right—But look what happened when remodeling plans took form. As if waving the magic wand, this once ugly abode takes on an entirely new exterior. Landscaping helped add the finishing touch.





Architectural improvement here might lie in emphasizing certain lines or features of the facade and in removing or at least softening other lines or features.



The extension of the kitchen and garage and the addition of a sunporch, in this case, improves the general appearance by broadening the base.

house was built of different exterior materials. Not all by any means, but some, of the original troubles can be alleviated by artful camouflage. The principal ingredient in this type of modernization is ingenuity, not money.

Something More Drastic. Some of the same principles apply in the more drastic modernizations for architectural effect. While the desired floor plan is the important consideration in adding wings, garages, or porches, such additions are also studies for architectural result. If the house is too tall—a common fault of older houses in many parts of the country—it is obviously desirable to make additions on the side, if possible, to broaden the house. Similarly, a small, compact house may be made to look much larger by putting such modern appurtenances as screened porches or attached garages to the side.

Or perhaps all the old place needs is a new styling, without basic structural changes. New facing material may bring out inherent beauty originally lost. This, like other major style alterations, usually requires the services of a good architect; it requires more knowledge of form and detail than most laymen possess.

Plan Suggestions. One safe generality about old houses is that the living room is too small. Another is that the kitchen is too large, or at least its space is inefficiently arranged. Closet and storage space is scant, also inefficient. And almost every family that modernizes a house wants more bathrooms, or at the very least a downstairs lavatory.

The living room is usually the starting place. It would be fortunate if the extra space in the kitchen could be added to the living room, but that possibility is unlikely. Perhaps the best suggestion—

indeed about the only one that has any chance of being widely applicable—is to check first the possibility of simply extending the living room outward; in other words, adding that much to the width of the house. That is the simplest way of improving both the size and proportions of the room. Frequently it also works out well on the second floor, for that much extra space might well average out to provide the extra bathroom, or even a bathroom plus a row of closets. Or, a steel beam could be put in to carry the second story across the opening.

Another advantage frequently results—extending the living room outward instead of inward would presumably obviate the need for moving the stairs. Incidentally, stairs deserve particular study with respect to modernization. Moving stairs costs a lot. It is not an uncommon point of argument, however, for so often a change in stair location is the step that solves plan problems. No advice is possible here except the warning that the cost is relatively high and the temptation strong.

It is a real pleasure to go to work on the kitchen. From a plan standpoint, there are so many possibilities. Usually a much better working area can be developed in two-thirds or three-fourths of the space, leaving the rest for a breakfast nook, lunch bar, kitchen office or what-not. Frequently also there is a pantry or "pass-pantry" to be added into the space to be rearranged, the storage capacity of the modern kitchen making them unnecessary. Other general ideas for developing such space include a downstairs lavatory, a backdoor "wet coats closet"; or maybe it works into a relocation of the dining room, freeing space elsewhere for a small study.



Left—This one-time pride of the 1915 era was due for a drastic change by modern plan and decoration. It needed a good deal more than warmth and livability.

Below—Color, texture and materials have done wonders in creating an atmosphere of cheer and modernity without exceeding a modest budget. Good designing is coming to the front in many similar cases.



is one of the age-old annoyances that always seems to grow worse instead of better. Perhaps it is a reflection of the better standards of living; there always seem to be more things to be stored. At any rate the closet space problem is by no means a detail, for we can be sure that life ahead will bring us continually more possessions.

And that brings up a final admonition. Nobody can see very well into the future, but when planning a new house or a modernization is the time the family should try its best. The least we can do is look at present trends and be sure our new home is not obsolete as soon as it is finished. Nearly every house is structurally sound long after obsolescence has rendered it valueless. Anything we can do to put our homecoming house ahead of its time instead of behind, means that many more happy years for us in it.

Don't Forget Closet Space. Closet space can be a serious problem in modernizing an old house if it is a small one. Many an old house, however, offers some compensation in extra hall space, which gives all sorts of possibilities. Frequently a long hallway can be closed at one end to give space for a bathroom, lavatory, or at least for an extra storage closet. Often the proper development of such area will involve moving bedroom doors, to make possible the shorter hall. Whatever it finally involves will usually prove worth while, for lack of closet space



Above—This poor neglected attic is typical of thousands. A waste of good liveable space for storing cast-offs and "Never-use-agains."

Below—Look what happened when good planning stepped in. Now converted into an attractive play-bedroom for the children the old attic is now an important room in this modernized home.





Add another important room to your home for recreation or hobbies. A Janitrol Gas Conversion Burner will keep that basement as clean and comfortable as any other room in the house.

When you remodel, whether it's your present home or one you purchase for this purpose, you, of



Insulate your home. Substantial fuel savings will follow in winter. A cooler house will be yours in summer. Many excellent insulating materials are now available. Talk your problem over with your building supply dealer or insulation contractor.

Weatherstrip doors and windows and seal tall cracks around window frames and wherever they may let in the cold winter air. Close off unused rooms and seal off cracks in doors between heated and unheated rooms.

Windows are the source of large fuel losses. Storm sash, storm doors, a vestibule where children run in and out can make substantial reductions in fuel consumption. Double-glazed windows are now available which make storm sash unnecessary. Full information can be obtained from your local building supply dealers.

Calking around windows not only helps control heat loss but prevents soot and dust seepage on drapes and walls. The cost is quite modest.

Your fireplace can be a belp or a bindrance in heating your house. When you start a fire, open damper wide for vigorous draft. When fire is well under way close damper to a point just short of smoking. This will slow up fuel consumption and prevent excessive loss of heat up flue. Close damper completely when fireplace is not in use.

course, will wish to modernize the heating plant.

If you have lived in the house for a period of time, you are undoubtedly familiar with some of the shortcomings of the heating system. You know which rooms are hard to heat, which ones are drafty and whether or not the entire house is chilly in real cold weather. You can help the gas company engineers or the heating contractor you call in by giving him this information at the time he is checking over your system to determine what changes or additions should be made.

The installation of any kind of an automatic heating unit, regardless of the fuel, will not overcome such heating difficulties, but, in fact, may tend to aggravate them. So, when you change to automatic heating have the entire system inspected and checked, and arrange with the contractor for such corrections and additions as are necessary so that you may enjoy the *full* benefits which a good automatic heating system will contribute to your home.

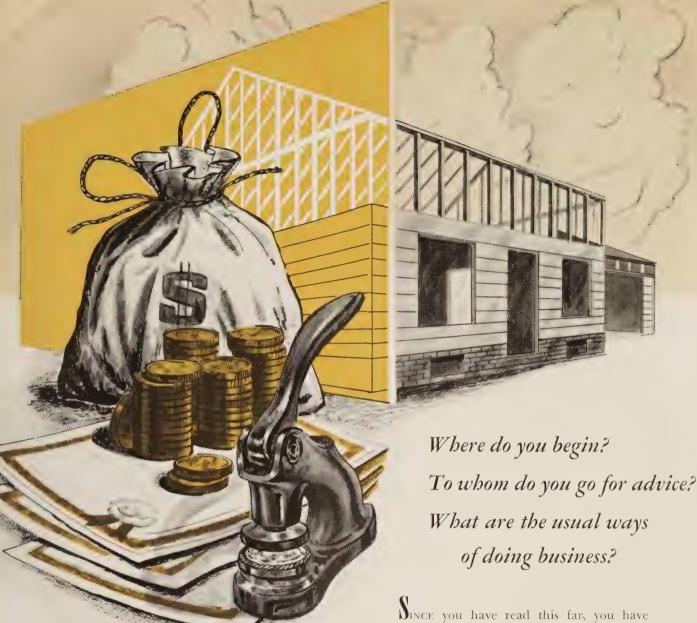
Conversion • If your present furnace or boiler is of efficient design, ample size and in good repair, it can be converted quickly, efficiently and at low first cost with a JANITROL Automatic Gas Burner.

An examination or check-up of your furnace or boiler may reveal that it is of incorrect capacity, of a design unsuitable for automatic firing, or in such physical condition that it should be replaced with a complete new gas designed furnace or boiler. (See pages 72 to 77). Then, follow the advice of your gas company or contractor and replace the old one, for to do otherwise is to invite trouble.

Insulation and winter windows are a good investment. Sometimes those chilly, drafty, uncomfortable rooms in your home are the result of something more than the defects of a faulty heating system. Large glass exposures and leaky windows can create a condition that the best heating system cannot overcome entirely. Storm sash would improve your comfort and reduce fuel consumption.

Complete Insulation • Insulation in the top floor ceilings is a good investment in both summer and winter comfort and pays off in fuel savings. Often the insulation of hard to heat bays and other projecting spaces results in much improved comfort and in other cases where side wall heat loss is excessive a complete insulation job is in order.

The addition of storm windows or insulation or both will reduce the heat loss of a house from 15% to as much as 50% depending on the construction of the house and what combination of the above is applied. This would permit the installation of a smaller heating system at consequent lower cost and deserves consideration in any remodeling plans.



The
BUSINESS
SIDE
of building
a house

Since you have read this far, you have probably obtained a broad understanding of what is involved in planning and selecting the style, materials and equipment for a new home. But how are you going to change your dreams and plans into something real? Where do you begin? To whom do you go for advice? What are the usual ways of doing business?

To find out the answers to these questions, you cannot build a house as an experiment. Experience cannot be your teacher, for you probably will build only one house in your lifetime.

You want to know all of the steps, don't you? Then let's begin at the beginning, just as though you did not own any land and had yet to buy it.

So, beginning with no land, what are the ways families go about getting a desirable bit of land and having a satisfactory house constructed on it?



ways to own a house

Path One

You make a wide search for land, and finally find something that pleases all members of the family. After having it investigated by your attorney, you buy it. Then you arrange with a licensed architect to design your home. With the plans completed, you have bids taken on them by various contractors and then select one. You take your plans to the bank or the building and loan association and get the necessary financing. Then the contractor builds it under the supervision of the architect.

Path Two

There is a community of homes you like. It has been laid out by a Development Company. The roads are in, the gas, sewers, water lines and the electric service. You can buy the land from the Company, and it will have its own architect design a house for you, and its own builder construct it for you. Even the financing of the house will be taken care of for you. Or, you may find a group of homes already completed by an Operative Builder, from which you may select one suitable to your needs. Many such homes will be available for those people with limited financial resources or who do not wish to be burdened with the job of planning and building.

Path Three

You may find a house, partly built by a Land Development Company or a builder who is offering it for sale. A few changes will make it what you like, so you buy the house and land and take over the mortgage when it is finished.

Path Four

You know a reputable builder very well, he owns a few parcels of land and will build the kind of house you want on one you select. He gets his architect to design it for you, or may modify previously built type to suit your needs, and he handles all the details including financing.

MERITS OF EACH WAY

To build a house according to Path One, is the way to get the house that is more individual and

best suited to the needs of your family. If you have confidence in your business ability and can visualize the house from the plans, then it is the right one for you. You will arrange with an architect (licensed one) to design your home and supervise its construction, paying him 6% of cost of house for the plans, details and specifications, and 4% for supervision. (While there is no set fee most architects charge between 6 and 12 percent of the total cost of building the house). The actual cost of the house, then, is the contractor's price plus the architect's fee.

If you are a little timid about business dealings, and are unable to visualize the house from the plans, then the other paths may give you what you want.

Here are the steps for buying the land and building the house according to Path One. They include all the details that you may encounter in following any of the other three paths.

1. SELECT THE ARCHITECT



In most states, now, architects are licensed, like physicians and lawyers, and, of course, you should select one who has a certificate to practice.

- (a) He will help you decide how big a house you can afford to own.
- (b) He will help you select the land.



2. BUY LAND FOR CASH

3. ARCHITECT PREPARES PLANS



- (a) Preliminary sketches and outline specifications are prepared and rough estimates of cost are obtained.
- (b) Changes are made to get the house within the limits of cost you can afford.
- (c) Final Plans, Specifications and Contract Documents are prepared.

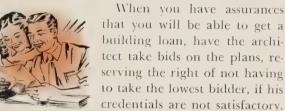


4. GET FINANCING

Take the plans and specifications and estimates to your Savings Bank or Building and Loan Association and make an application for a building loan.



5. TAKE BIDS ON THE PLANS







6. SIGN THE CONTRACT WITH THE BUILDER



7. ARCHITECT SUPERVISES

As the house goes up, your Architect supervises it, checks construction and makes recommendations.



8. ALL CLEAR BEFORE FINAL PAYMENT

After first payment to builder, he should be required to submit receipts for paid bills, before getting any more payments. The architect should endeavor to see that the builder is not paid more than 85% of the cost of materials and labor on the job, until final acceptance of the work.



9. FINAL INSPECTION



No final payment should be made to builder until he submits releases of mechanic's liens, and work has received approval of inspector of the Loaning Institution, and all certificates and guarantees have been turned over to owner.



ou may not wish to buy land, first, but consult your architect. Don't be reluctant to discuss your problems in a general way. The architect will not charge a fee for such meetings. When you are satisfied that you like him, and feel that you will get along together, sign an agreement with him for his professional advice and services. Let him study your whole problem of the size and cost of house, suited to your needs and income, and let him help you estimate how much you ought to pay for the land, before you look around for it.

Guided by the knowledge of the amount you ought to pay for the property, shop around in those neighborhoods which appeal to you personally. It is obvious that you will consider such things as transportation, schools, fire and police protection. ease of reaching shopping centers, undesirable nuisances such as nearby dump-heaps, incinerators, potential slum areas, and any trends towards commercial buildings.

When you have found a number of parcels of land that appeal to you and are within your price range, call on your architect to visit them with you. He will be quick to detect such problems as poor drainage, extra costs due to rock excavations, lack of utilities such as gas, electricity, water and sewer. He will also see landscape possibilities which may escape your attention.

While you are there, take a look at the character of the houses next to you and in the immediate vicinity. You will probably want your house to fit in with them and not be conspicuous as to style and size. It would be a bad investment to build a big house in with small houses, and vice versa.

From the local real estate men and other sources, you should try to learn about the most recent mortgages granted in the neighborhood, so that you know that lending institutions approve it. If you



gain his confidence maybe he will find out from the local F.H.A. representative whether the property is on the approved list.

When you decide upon a certain plot, get your attorney to investigate such things as the effect of the zoning law upon the future development, and what are the restrictions and how long they will run. You will need your attorney's services before purchasing the land, so you should get him on the job well ahead of this time.

Procedure in Purchasing Land

When you buy a plot of ground there are three steps to be taken.

First— a contract for its purchase is drawn up between you and the seller.

Second—your attorney investigates the title and the possible encumbrances on it.

Third— the title is closed and you take over the deed.

When you sign the contract, you put down a deposit. In the contract you agree to pay the seller a certain sum of money at a specified time, provided the conditions are agreeable to both parties. To

avoid any doubts about the property, it is carefully described in the contract.

When the date of closing comes around, you should have a complete report, right up to the last moment, of the record of encumbrances. If the record proves to be clear, you will be expected to pay cash or give a certified check.

The seller should present to you the latest tax and water receipts.

Upon payment, you take over the title to the land, and, as evidence of this transaction you receive the "Deed" to the property. This is a convenient memorandum giving the date of the delivery. On it appears your name as the grantee and the seller's name as the grantor. If the seller is married, his wife signs it too, so that the deed is free of his wife's dower right. The purchase price mentioned is seldom the real one, but something like "ten dollars," to cover up the actual price.

When you become the owner of the property, you are said to be the owner of a "fee simple" and you may use it and dispose of it during your lifetime or will it to whomsoever you wish. If you die without a will, it passes to your heirs.

How Big a House Can You Afford? It is not what the house costs to build, but what it costs to keep, that is important. This is called the rent equivalent. For your particular annual income, you have learned to limit yourself to a certain amount of rent for the shelter you live in, say one fourth of it. You ought not to pay out on your new home any more than this sum in what is called rent equivalent.

Items Making Up Rent Equivalent

- 1. Interest on the mortgage
- 2. Interest on money you put into land and house
- 3. Amortization of mortgage
- 4. Depreciation
- 5. Upkeep
- 6. Taxes and Fire Insurance

NOTE: Cost of heating is only included when comparing rent equivalent with rent of apartment where heat is provided.

The interest on the mortgage, today, may be estimated at about 5%. The interest on the money which you put into the land and house may be forgotten, for you will always be glad you have invested it in so solid a thing as your home.



The amortization, or the paying off of the borrowed money in installments, should, strictly speaking, be counted in your budget as savings, but the bank will make you look on it as rent, for you have to raise it every month, whether you want to or not.

Taxes and fire insurance may be roughly estimated at 21/2% of the total.

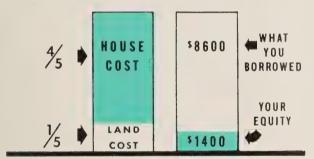
Depreciation may be figured at about 1½% of the total investment, but as this is only a bookkeeper's entry, and you never have to pay it, and may never know of its existence, for practical purposes it may be discarded from your estimates.

Upkeep is figured at about $1\frac{1}{2}\%$ of the total investment, but if you are handy with tools this may be reduced.

The Rent Equivalent Estimating

Assume that you have an investment of \$10,000 in house and lot. The cost of the land ought to be about 1/5th of this or \$2,000, leaving \$8,000 as the cost of the house.

Assume you have obtained an F.H.A. insured mortgage and have borrowed \$8,600, thus putting in \$1,400 in cash.



Here is the way you would estimate the rent equivalent for these conditions.

the rent equivalent for these conditions.
Interest on building loan of
*\$8,600 at 5%\$430.00
Average amortization is about
3% for period of twenty years 258.00
Cost of Insurance of Mortgage
is about $\frac{1}{2}\%$
Cost of Servicing Loan is $\frac{1}{2}\%$
Upkeep is $1\frac{1}{2}\frac{0}{0}$ total investment
of \$10,000 150.00
Taxes & Fire Insurance are
about $21/2^{0}$ of total
Total Annual Rent Equivalent\$1,168.00
This is \$97.33 per month Rent Equivalent.

^{*}Interest is high at first, but as years go by, more of the principal is paid off and interest is decreased.

Examples of Other Combinations

Maximum Building Loan	Total Investment	Approximate Monthly Rent Equivalent
\$ 3,600	\$ 4,000	\$ 40.00
4,500	5,000	48.50
5,400	6,000	57.25
7,000	8,000	78.75
8,000	10,000	90.00
9,600	12,000	110.00
12,000	15,000	125.00

Undoubtedly when you finish your new home there are furnishings you may need or want immediately. It would be well to check below and itemize the costs to make sure you will have the money necessary to complete your home.

Carpeting or rugs, drapes, curtains, shades, furniture—living room, bedrooms, dining room, etc., lamps, fireplace equipment, porch furniture; Appliances—Gas Range, Refrigerator, Water Heater.

A CHECK LIST WILL CLEAR UP THE QUESTION OF HOW MUCH YOUR HOUSE WILL COST

Be sure to check these items of cost and determine whether or not they are included in contractor's bid price. (Sometimes omitted)

Cost of survey of plot and locating house
Preparation of site—cutting trees, shrubs, etc.
Sodding, planting trees and shrubs
Fire insurance
Owner's liability insurance
Architect's fee and traveling expenses
Fuel for heat during construction
Water and electricity for construction
Cleaning house and windows after contractor
Lighting fixtures and hanging them
Interior decorations like wall painting, Venetian blinds, etc.
Kitchen floor and counter covering
Removable fixtures such as range, refrigerator, washing machine, laundry dryer, etc.

Rock excavation (have unit cost agreed upon in contract)
Damp- and water-proofing cellar

Roads and paths

Screens and storm sash and storm doors Insulation, weatherstrips, caulking

Permits, Certificates
Sentic tank if no sewer

Septic tank if no sewers are in Well and pump if no water supply Sidewalks and driveway

Garage

Eaves

Lot drainage Termite protection Jetá plan a PEACETIME HOME.

FINANCING

You should neetry to finance the Building of a house on too close a margin. It is a business venture and there are too many things that can be tangled up, if you do not have enough spare cash to handle emergencies when you meet them. For example, just as you are finishing the house, and are expecting to get the final payment from the bank on your Building Loan, some mechanic may file a lien on the property, because he may not have been paid by the sub-contractor. A lien is only a notice to you that he claims that there is money due him, but the bank will not give you any money on that final payment until you have removed it. The whole matter may be a very disputed one, and maybe the mechanic should not receive this money, nevertheless, you have to remove it. You cannot pay the mechanic this money, for you did not employ him. You cannot pay the subcontractor this money, for he is under contract with the general contractor. If you have already paid the general contractor the amount sufficient to cover this man's wages, then you do not want to pay it twice. Yet, the bank insists that you must remove the lien, so you do so by bonding it, and this requires money.

It is obvious then, that you ought not to begin building a home until you own the land, free and clear and have about \$500 or more of ready cash to take care of a situation like the above.

So, if you have not saved enough money to buy the land on a cash basis, wait longer and save some more in the bank or in the building and loan association or buy a home already built. In some states, the savings banks offer a "Plan a Purchase Account." You add to this account five or ten dollars a week and it grows with compound interest. When you have saved enough to swing your end of the home building venture, you will be able to talk things over with the officials of the bank regarding the building loan needed to complete the deal.

If you have a good job and a tidy sum to back you up, you will not have much difficulty in getting a loan up to $66\frac{2}{3}\%$ of the total value of land and house. If you are able to get an F.H.A. insured mortgage, you will be able to borrow as much as 80% and in unusual cases as much as 90%.

You may recall, that we showed in the checking list, that contractors do not usually include in their estimate of the cost of the house such removable items as ranges, refrigerators, and other removable equipment. Lending institutions take the same point of view, but there is a change taking place. In forty-two states, the kitchen range is included as part of the cost of the house, when a building loan is made on it. So, too, when the automatic heating unit is made an integral part of the house, like a gas-fired furnace, all is included in the cost.

Veteran's Financing. The Servicemen's Readjustment Act of 1944, called the "GI Bill of Rights" will make it possible for veterans to borrow up to \$2000 for the purchase of certain specified things, such as (a) residential property, (b) construction of a home or (c) alterations to a home. A liberal interpretation of the law seems to indicate that the government will guarantee 100% of the loan, if it is used as the down payment on a home financed by an F.H.A. loan. In other words, this loan would be something like a second mortgage on the property, making it possible for a Serviceman to buy land and build a home without much cash.

What is a Building Loan and a Mortgage? When you borrow money from the bank or building and loan association to build your house, you sign an agreement with the institution that you will erect a house, as described by the plans and specifications upon the property you own and designate. You first put up your money in this transaction by offering the land, free and clear, and then you pay the first bill submitted by the contractor building the house. When the house reaches the point that it is roughly framed and has the roof on it, the bank will advance you the first or initial stage payment of the building loan.





You will not get another payment until the house is practically finished. The final instalment will not be forthcoming until the house is completely finished, all bills paid and all mechanics' liens, if any have been filed, are removed.

Inspection. To protect its interest, the lending institution has the house inspected before making any payments. If the loan is an F.H.A., insured one, a government inspector looks it over. Between the inspection of your architect and that of this government inspector, you can feel assured that you are getting a well built house that conforms to the plans.

You try to arrange with the contractor to have his payments come due about the time you receive your money from the bank.

For the money loaned to you, in this way, you sign a Bond of Indebtedness, which is essentially your promise to pay it back. Your wife must also sign the Bond, and you must give evidence that your assets are ample to cover the outstanding debt. You agree to pay off this indebtedness in a certain number of years, say 10, 15 or 20.

As collateral for this loan, you give a Mortgage on the property. This is a pledge that if you do not meet your obligations, the lender can take the property away from you to satisfy his loan. To make sure that the property is worth its full amount, you are required to keep it in good repair and pay all taxes and cover it with fire insurance.

Your Guide to Building. What relationship exists between you, the architect and the contractor?

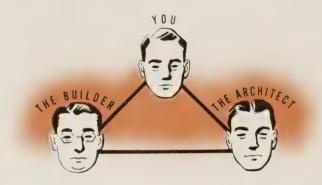
The architect is your professional adviser. He guides you through the business of building your house. He is your agent in dealing with other persons on your behalf. But, there is a limit to his actions which you must understand by reading the "General Conditions of the Contract" which appear at the head of your specifications for the house.

When you sign the contract with the builder, the architect's position changes. He now becomes the official interpreter of the contract's conditions. He cannot side with you or the contractor, but must see to it that the terms of the contract are lived up to by both parties. He inspects the construction to see that it conforms to the plans and specifications. If he finds it satisfactory he issues a certificate of payment and you must pay the contractor.

You, as the owner, owe duties to the architect, other than the payment of bills. You owe him sympathetic cooperation above all other matters. You

are supposed to furnish him, too, with a complete and accurate survey of the site.

You should never go over the head of your architect and give orders to the contractor, because the courts hold that by so doing you have waived the



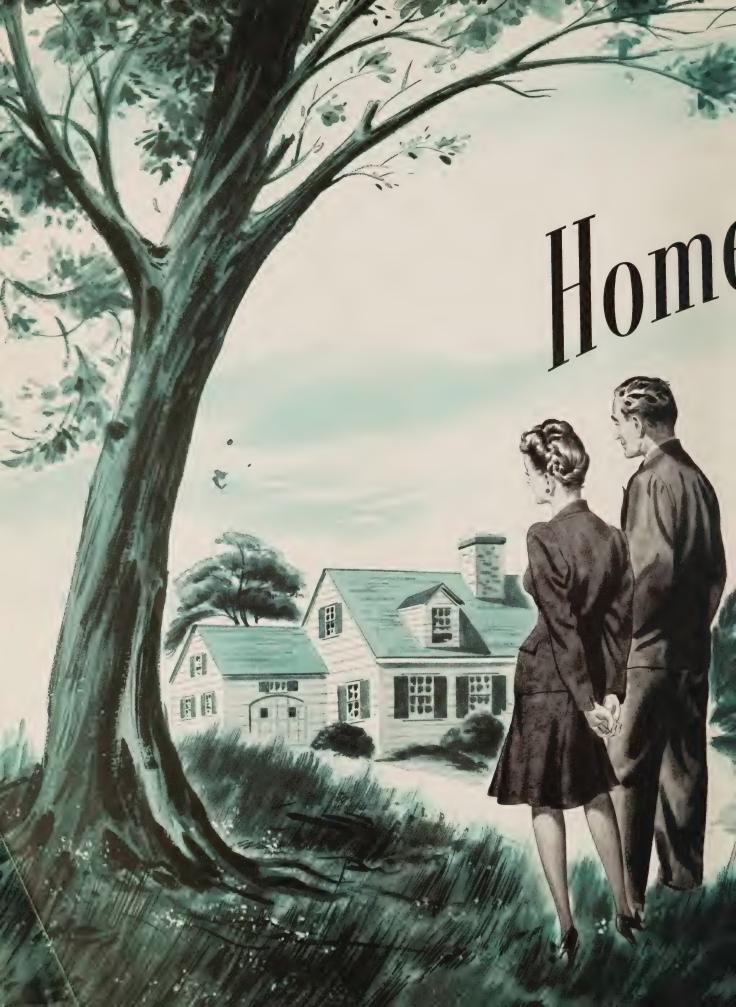
conditions of the contract and it no longer exists as agreed upon in writing. Any changes in construction, must be duly ordered through the architect's office to make them legal and binding.

Competitive Bidding. When the plans and specifications have been drawn up by your architect, he calls for bids on them by inviting certain builders in, whose reputation is known to be satisfactory. You do not agree to give the contract to the lowest bidder, for you want to be sure to get one who is reliable, capable and honest. Preliminary investigations may not always reveal such contractors from those who are not entirely scrupulous.

Even before you give out the contract, your architect should go over the figures submitted by the contractor to see that he has not made any mistakes in figuring the cost. It is fatal to be contracted to a builder who is losing money on the job. Statistics show that practically no contractors finish up a house upon which they are losing money in spite of the laws.

You will hear gossip that you should make your contractor give you a bond that he will finish the job. In the construction of small houses this is rarely done, for the simple reason, that the owner has to pay directly or indirectly for the cost of such a bond and the security companies charge so much that few owners are willing to pay.





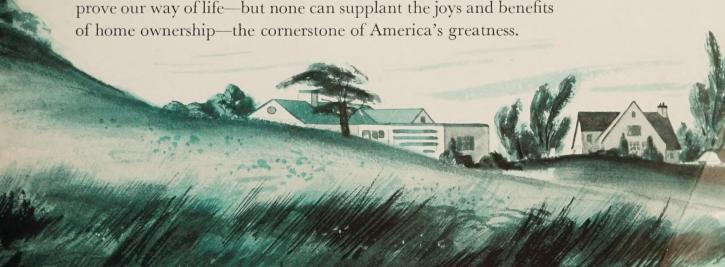
Building ... is a Thrilling Adventure

THERE is possibly no greater occasion in the life of a family than the digging of the first spade of earth for the foundation of a home. There is no day so momentous, as the one, when after months of planning and building, you first step over the threshold of the house that will become your home.

Home building is more than an adventure. It is the culmination of cherished hopes and dreams, and satisfies the deeply rooted desires of normal, peaceful people to possess a plot of land and a house which becomes the home of which they are proud and to which they belong.

Home ownership brings peace to the mind, body and spirit. It is a soul satisfying experience from the time the first rough plan is sketched until it becomes an integral part of your family and community life.

Peace brings many new and exciting things, all designed to improve our way of life—but none can supplant the joys and benefits of home ownership—the cornerstone of America's greatness.



Form No. QGP45-2 Printed in U.S.A.



Use this Pocket for Filing Your

HOME PLANNING IDEAS

